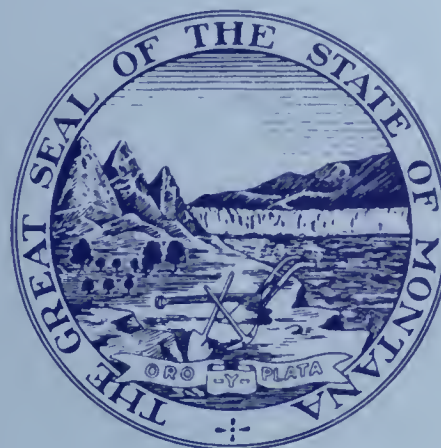


S
336.222 Cole-Layer-Trumble
M26mam Company
Montana
appraisal manual

MONTANA APPRAISAL MANUAL



Prepared by

Cole-Layer-Trumble Company

Dayton, Ohio, 45406

FOREWORD

The purpose of the *Montana Appraisal Manual* is to establish standards, procedures, and guidelines to be followed by county appraisers in the appraisal of real estate in the State of Montana.

While this manual may not answer every question related to property valuation, it does provide a procedure that can insure a uniform statewide approach to value. The proper use of this manual is important in maintaining a quality valuation system.

This manual is supplied to Montana Appraisers for the purpose of valuing locally assessed properties.

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GENERAL TABLE OF CONTENTS

INTRODUCTION

TABLE OF CONTENTS FOR PART ONE
APPRAISAL PLANTABLE OF CONTENTS FOR PART TWO
APPRAISAL THEORY

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 2-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 2-</u>
1.	RIGHTS AND THE PRINCIPLES OF VALUE	1	2.3.	APPLYING THE INCOME APPROACH	8
1.1.	BUNDLE OF RIGHTS	1	2.3.1.	INTRODUCTION	8
1.2.	THE NATURE AND MEANING OF VALUE	2	2.3.2.	THE PRINCIPLES OF CAPITALIZATION	9
1.3.	VALUE IN USE AS OPPOSED TO VALUE IN EXCHANGE	3	2.3.3.	EXPLORING THE RENTAL MARKET	9
1.4.	THE PRINCIPLE OF SUPPLY AND DEMAND	3	2.3.4.	QUESTIONS RELATING TO INCOME DATA	9
1.5.	THE PRINCIPLE OF HIGHEST AND BEST USE	3	2.3.5.	ANALYSIS OF EXPENSE DATA	10
1.6.	THE PRINCIPLE OF CHANGE	4	2.3.6.	CAPITALIZATION METHODS	11
1.7.	THE PRINCIPLE OF SUBSTITUTION	4	2.3.7.	CURRENT TECHNIQUES	12
1.8.	TRADITIONAL APPROACHES TO VALUE	4	2.3.8.	DIRECT CAPITALIZATION	12
2.	PROPERTY VALUATION TECHNIQUES	5	2.3.9.	MORTGAGE EQUITY CAPITALIZATION	12
2.1.	APPLYING THE COST APPROACH	5	2.3.10.	RESIDUAL TECHNIQUES	13
2.1.1.	REPLACEMENT COST	5	2.3.11.	MORTGAGE EQUITY METHOD EXAMPLE	13
2.1.2.	ESTIMATING REPLACEMENT COST	6	3.	LAND VALUATION TECHNIQUES	14
2.1.3.	DEPRECIATION	6	3.1.	COMPARABLE SALES METHOD	14
2.1.4.	ESTIMATING DEPRECIATION	7	3.2.	THE LAND RESIDUAL TECHNIQUE	15
2.2.	APPLYING THE MARKET DATA APPROACH	7	3.3.	RATIO METHOD	16
2.2.1.	SELECTING VALID COMPARABLES	7	4.	MASS APPRAISING	17
2.2.2.	PROCESSING COMPARABLE SALES	8	4.1.	OVERVIEW	17
			4.2.	DATA INVENTORY	19
			4.3.	PROCESSING THE DATA	22

TABLE OF CONTENTS FOR PART THREE
DATA COLLECTION

SECTION 31. PROPERTY ADMINISTRATION DATA

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 31-</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 31-</u>
901	MUNICIPALITY CODE	1	913	DBA	3
902	ASSESSMENT LIST CODE	2	914	MAILING ADDRESS	3
903	LEVY DISTRICT CODE	2	915	CITY, STATE, ZIP CODE	3
904	ASSESSOR'S CODE	2	916	FOREIGN COUNTRY	3
906	PROPERTY ASSESSMENT CHANGE CODE	2	918	IN-CARE-OF TAXPAYER NAME 1	3
911	OWNER NAME 1	2	919	IN-CARE-OF TAXPAYER NAME 2	3
912	OWNER NAME 2	2	920	IN-CARE-OF MAILING ADDRESS	3
			921	IN-CARE-OF CITY, STATE, ZIP CODE	3

GENERAL TABLE OF CONTENTS

GENERAL TABLE OF CONTENTS (Cont'd)

SECTION 31. PROPERTY ADMINISTRATION DATA (Cont'd)

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 31-</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 31-</u>
922	IN-CARE-OF FOREIGN COUNTRY	4	961	SUBSIDIARY OWNER NAME	5
925	ADDITION / SUBDIVISION	4	965	SUBSIDIARY NOTES	5
927	SECTION, TOWNSHIP, RANGE	4	982-984	EXEMPTION APPLICATION DATA	5
929	SHORT LEGAL DESCRIPTION	4	985	APPEAL APPRAISER ID	6
934	DEED BOOK AND PAGE	4	986-989	AB-26 FILING INFORMATION	6
936	PREVIOUS ID NUMBER	5	990-993	COUNTY APPEAL INFORMATION	7
939	NEW CLASS CODE & ALLOCATED		994-997	STATE TAX APPEAL BOARD	
	BASE VALUE	5		INFORMATION	8
956	SUBSIDIARY DEED BOOK AND PAGE	5	998	COURT APPEAL INFORMATION	8

APPENDIX A31

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A31-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A31-</u>
A31.1.	STATE POSTAL ABBREVIATIONS	1	A31.2.	PROPERTY CLASSIFICATION CODES	2

SECTION 32. COMMON CAMA DATA

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 32-</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 32-</u>
010	GEOCODE OR PARCEL IDENTIFICATION	1	301-330	LAND CLASSIFICATION CODE	22
060	MAP	13	331-336	AGRICULTURAL LAND TOTALS	22
070	ROUTING NUMBER	14	340	AGRICULTURAL IRRIGATION	22
101	PROPERTY TYPE	14	341	TIMBER	23
102	IMPROVEMENT CLASSIFICATION CODE	15	400	TOPOGRAPHY	23
103	LIVING UNITS	15	410	UTILITIES	24
104	ZONING	16	420	ACCESS	24
105	NEIGHBORHOOD	16	430	FRONTING	25
110	PROPERTY ADDRESS	16	440	LOCATION	25
115	CAMA CHANGE CODES	17	450	PARKING	26
170	ECONOMIC CONDITION FACTOR	17	461-463	APPRAISAL INSPECTION INFORMATION	26
180	PERCENTAGE OF OWNERSHIP	17	464	PERSON CONTACTED	27
190	PARCEL TIEBACK	17	468	CONTINUED REVIEW NEEDED	27
191	CONDOMINIUM OWNERSHIP		471-472	BUILDING / ELECTRICAL PERMIT	
	PERCENTAGES	18		RECORD	28
201-203	SALES DATA	18	481-483	NOTES	28
299	DELETE: LAND	19	885	APPEAL ADJUSTMENT: LAND	28
300	NONE	19	886	APPEAL ADJUSTMENT: MAIN BUILDING	29
301-303	FRONT FOOT	19	887	APPEAL ADJUSTMENT: ACCESSORY	
305	1982 STANDARD DEPTH	20		BUILDING	29
311-313	SQUARE FOOT	20	888	APPEAL ADJUSTMENT: FLAT VALUE	29
321-329	ACREAGE	20	891-897	OVERRIDE CODE & VALUE	29
301-329	INFLUENCE FACTORS	21	960	FINAL BASE VALUE	29
330	SITE	22			

GENERAL TABLE OF CONTENTS (Cont'd)

APPENDIX A32

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A32-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A32-</u>
A32.1.	COUNTY NUMBERS	1	A32.5.1.	PARCEL DEPTH VALUATION CALCULATIONS	9
A32.2.	STANDARD ABBREVIATIONS FOR STREET ADDRESSES	2	A32.5.2.	DEPTH FACTOR TABLES	9
A32.3.	PARCEL SIZING PROCEDURES	3	A32.6.	DIVISION OF A SECTION OF LAND	12
A32.3.1.	PARCEL SIZING PRINCIPLES	3	A32.7.	AGRICULTURAL LAND PRODUCTIVITY GRADE SCHEDULES	13
A32.4.	PARCEL SQUARE FOOTAGE FORMULAS	7			
A32.5.	LOT DEPTH VALUATION FACTORS	9			

SECTION 33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 33-</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 33-</u>
499	DELETE: RESIDENTIAL BUILDING	1	566	MOBILE HOME	11
500	RESIDENTIAL IMPROVEMENT INDICATOR	1	567	MOBILE HOME SERIAL / TITLE NUMBER	11
505	STORY HEIGHT	3	568	MOBILE HOME DIMENSION	11
506	EXTERIOR WALLS	3	570	AGE	11
507	STYLE	3	571	DEPRECIATION	12
508	ROOF	5	572	PHYSICAL CONDITION	13
515	FOUNDATION	6	573	GRADE	13
520	BASEMENT	6	574	COST AND DESIGN FACTOR	14
521	FINISHED BASEMENT	6	575	FLAT ADD COSTS	14
525	HEATING & COOLING	7	576	CDU	14
528	HEATED FLOOR AREA	8	577	PERCENT COMPLETE	15
530	LIVING ACCOMMODATIONS	8	581	FLOOR AREAS BY LEVEL	15
535	PLUMBING	8	582	UNFINISHED FLOOR AREAS BY LEVEL	15
540	ATTIC	9	599	DELETE: ADDITIONS	16
545	GARAGE STALLS	9	601-608	ADDITIONS	16
550	MASONRY FIREPLACE	9	699	DELETE: OBY	18
551	PREFAB FIREPLACE and STOVE	10	701-706	OTHER BUILDING & YARD IMPROVEMENTS	18
557-558	MISCELLANEOUS OTHER FEATURES	10	711	MISCELLANEOUS IMPROVEMENTS	21
560	CONDOMINIUM LEVEL	10	800	TOTAL OTHER IMPROVEMENTS	21
561	CONDOMINIUM UNIT TYPE	10			
562	CONDOMINIUM AMENITIES	10			

APPENDIX A33

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A33-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A33-</u>
A33.1.	STORY HEIGHT ILLUSTRATIONS	1	A33.4.	BUILT-IN GARAGE EXAMPLES	18
A33.2.	RESIDENTIAL ARCHITECTURAL STYLES	3	A33.5.	PERCENT COMPLETE TABLE	20
A33.3.	ROOF TYPE ILLUSTRATIONS	17			

GENERAL TABLE OF CONTENTS

GENERAL TABLE OF CONTENTS (Cont'd)

SECTION 34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 34-</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 34-</u>
599	DELETE: COMMERCIAL BUILDING	1	800	TOTAL OTHER IMPROVEMENTS	20
600	GENERAL BUILDING DATA	3	812	PERCENT COMPLETE	24
601-608	BUILDING OTHER FEATURES -		820	MODEL ADJUSTMENTS	24
	ATTACHED IMPROVEMENTS	6	825	OCCUPANCY OVERRIDE	24
611-618	EXTERIOR DATA	10	830	VALUATION METHOD	24
621-628	INTERIOR DATA	15	835	INCOME YEAR OVERRIDE	25
631-638	APARTMENT DATA	19	965	REVIEWER REASON CODE	25
639	PARKING DATA	19	868	GENERAL OWNERSHIP	25
699	DELETE: COMMERCIAL OBY	19	869	LIMITED OWNERSHIP	25
701-706	OTHER BUILDING & YARD IMPROVEMENTS	19			

APPENDIX A34

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A34-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A34-</u>
A34.1.	UNIQUE COMMERCIAL / INDUSTRIAL DATA COLLECTION PROCEDURES	1	A34.1.5.2.	PARKING DECKS CONNECTED TO AND AS LEVELS OF AN OFFICE BUILDING	7
A34.1.1.	MIXED USE STRUCTURES, INCLUDING OFFICE WAREHOUSES	1	A34.1.6.	ELEVATORS	8
A34.1.2.	MEZZANINES	2	A34.1.7.	ESCALATORS	9
A34.1.3.	PENTHOUSES	3	A34.2.	BUILDING CONSTRUCTION CLASSES	10
A34.1.4.	OPEN AREAS	4	A34.2.1.	WOOD FRAME / JOIST / BEAM	10
A34.1.5.	OPEN PARKING DECKS	6	A34.2.2.	FIRE RESISTANT	11
A34.1.5.1.	PARKING DECKS AS A SEPARATE STRUCTURE	6	A34.2.3.	FIRE PROOF	12
			A34.2.4.	PRE-ENGINEERED STEEL	13

SECTION 35. SKETCH VECTORING

<u>PARAGRAPH NO. OR FIELD CODE</u>	<u>PARAGRAPH TITLE OR DESCRIPTION OF FIELD</u>	<u>PAGE 35-</u>	<u>PARAGRAPH NO. OR FIELD CODE</u>	<u>PARAGRAPH TITLE OR DESCRIPTION OF FIELD</u>	<u>PAGE 35-</u>
35.1.	CONTENT OF DATA FIELDS	1	35.5.1.	ANGLE COMMAND - V	5
649	DELETE: SKETCH VECTORS	1	35.5.2.	FINISH COMMAND - F	6
651-658	SKETCH VECTORS	1	35.5.3.	OFF-SET COMMAND - S	7
35.2.	DEFINITIONS	2	35.5.4.	POINT COMMAND - P	8
35.3.	SKETCH VECTORING RULES	3	35.5.5.	RECTANGLE COMMAND - X	10
35.4.	PROCEDURE	4	35.6.	COMMON ERRORS ENCOUNTERED IN SKETCHING	11
35.5.	COMMANDS	5			

GENERAL TABLE OF CONTENTS (Cont'd)

APPENDIX A35

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A35-</u>
A35.	SKETCH VECTOR EXAMPLES	1

SECTION 36. INCOME AND EXPENSE DATA

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 36-</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE 36-</u>
101	PROPERTY TYPE	1	269	APARTMENT FEATURES	3
102	IMPROVEMENT CLASS CODE	1	271	PARKING	3
104	ZONE	1	272	VACANCY	4
105	NEIGHBORHOOD	1	273	INSURANCE EXPENSE	4
201-203	SALES DATA	1	274	PROPERTY TAX EXPENSE	4
210	EQUITY	1	275	MAINTENANCE EXPENSE	4
220	POTENTIAL GROSS INCOME	2	276	INTERIOR MAINTENANCE EXPENSE	4
230	BUILDING DATA	2	277	EXTERIOR MAINTENANCE EXPENSE	4
231-238	GENERAL RENT INFO	2	278	ELEVATOR EXPENSE	4
251	ROW / HALL / BOTH	2	279	UTILITY EXPENSE	4
252	TOTAL NUMBER OF UNITS	2	280	RESERVE FOR REPLACEMENT	4
253	TOTAL NUMBER OF ROOMS	2	281	MANAGEMENT EXPENSE	5
254	TOTAL NUMBER OF BEDROOMS	3	282	GENERAL EXPENSE	5
255	AVERAGE SQFT / UNIT	3	283	MISCELLANEOUS EXPENSES	5
256	MAJOR RENOVATION	3	291-292	NOTES	5
261-266	APARTMENT UNIT BREAKDOWN	3	600	STRUCTURE TYPE	5
268	APARTMENT AMENITIES	3			

APPENDIX A36

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE A36-</u>
A36.	OPERATING STATEMENTS	1

GENERAL TABLE OF CONTENTS

GENERAL TABLE OF CONTENTS (Cont'd)

TABLE OF CONTENTS FOR PART FOUR REPLACEMENT COST

SECTION 41. ESTIMATING REPLACEMENT COST NEW

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 41-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 41-</u>
41.1	REPLACEMENT COST	1	41.1.4.	APPLYING THE PROPER GRADE FACTOR	2
41.1.1.	REPLACEMENT COST DEFINITION	1	41.1.5.	APPLYING THE PROPER COST AND DESIGN FACTOR	3
41.1.2.	PRICING SCHEDULES	1	41.2.	PRICING SCHEDULES AND COST TABLES	3
41.1.3.	SELECTING THE PROPER QUALITY GRADE	1			

SECTION 42. DWELLINGS

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 42-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 42-</u>
42.1.	QUALITY GRADE SPECIFICATIONS	1	42.3.1.	GENERAL APPLICATION	18
42.1.1.	INTRODUCTION	1	42.3.2.	MANUAL PRICING PROCEDURE	18
42.1.2.	QUALITY GRADES AND FACTORS	2	42.4.	PRICING TABLES	20
42.2.	QUALITY GRADE SPECIFICATIONS AND PHOTOGRAPHS	2	42.4.1.	DWELLING BASE PRICING SCHEDULE	20
42.2.1.	GRADE 1 - CHEAP QUALITY RESIDENCES	2	42.4.2.	BASE PRICE ADJUSTMENTS	22
42.2.2.	GRADE 2 - POOR QUALITY RESIDENCES	5	42.4.2.1.	HEATING AND AIR CONDITIONING ADJUSTMENTS	22
42.2.3.	GRADE 3 - LOW COST QUALITY RESIDENCES	6	42.4.2.2.	PLUMBING ADJUSTMENTS	22
42.2.4.	GRADE 4 - FAIR QUALITY RESIDENCES	9	42.4.3.	ADDITIONS	23
42.2.5.	GRADE 5 - AVERAGE QUALITY RESIDENCES	10	42.4.3.1.	PORCHES	23
42.2.6.	GRADE 6 - GOOD QUALITY RESIDENCES	13	42.4.3.2.	ATTACHED UTILITY STRUCTURE	23
42.2.7.	GRADE 7 - VERY GOOD QUALITY RESIDENCES	14	42.4.3.3.	ATTACHED GARAGES	24
42.2.8.	GRADE 8 - EXCELLENT QUALITY RESIDENCES	17	42.4.3.4.	CARPORT / CANOPY; ATTACHED GREENHOUSE; DECKS; STOOPS	25
42.3.	MANUAL PRICING INSTRUCTIONS	18	42.5.	OTHER FEATURES	25
			42.5.1.	BASEMENT GARAGES	25
			42.5.2.	MASONRY FIREPLACES	25
			42.5.3.	PREFABRICATED METAL FIREPLACES / STOVES	26
			42.5.4.	MISCELLANEOUS OTHER FEATURES	26
			42.5.5.	FINISHED BASEMENT AREA	26

GENERAL TABLE OF CONTENTS (Cont'd)

SECTION 43. MOBILE HOMES

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE 43-	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE 43-
43.1.	QUALITY GRADE SPECIFICATIONS	1	43.2.4.	GRADE E - EXCELLENT QUALITY	
43.1.1.	INTRODUCTION	1		MOBILE HOMES	9
43.1.2.	QUALITY GRADES AND FACTORS	1	43.3.	MOBILE HOME CLASSIFICATION GUIDE	10
43.2.	QUALITY GRADE SPECIFICATIONS		43.3.1.	MANUFACTURERS ORDER	10
	AND PHOTOGRAPHS	2	43.3.2.	MODEL NAME ORDER	24
43.2.1.	GRADE L - LOW COST QUALITY		43.4.	MANUAL PRICING INSTRUCTIONS	38
	MOBILE HOMES	2	43.5.	PRICING TABLES	40
43.2.2.	GRADE A - AVERAGE QUALITY		43.5.1.	MOBILE HOME RATES	40
	MOBILE HOMES	5	43.5.2.	HEATING AND AIR CONDITIONING	
43.2.3.	GRADE G - GOOD QUALITY MOBILE			ADJUSTMENTS	41
	HOMES	6	43.5.3.	LIVING AREA ADDITIONS	42

SECTION 44. RESIDENTIAL & AGRICULTURAL OUTBUILDINGS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE 44-	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE 44-
44.1.	QUALITY GRADE SPECIFICATIONS	1	44.4.2.	LEAN-TOS	8
44.2.	MANUAL PRICING INSTRUCTIONS	2	44.4.3.	MILK HOUSES AND MILKING PARLORS	11
44.3.	RESIDENTIAL YARD ITEMS	3	44.4.4.	SWINE BARNS	12
44.3.1.	DETACHED GARAGES	3	44.4.5.	TANKS	13
44.3.2.	CARPORT / CANOPY	3	44.4.6.	SILOS	14
44.3.3.	PAVING	3	44.4.7.	POLE FRAME BUILDINGS AND SHEDS	17
44.3.4.	DETACHED RESIDENTIAL		44.4.8.	GRANARIES	18
	GREENHOUSES	4	44.4.9.	IMPLEMENT SHEDS	18
44.3.5.	BOATHOUSES AND BOAT DOCKS	4	44.4.10.	QUONSET BUILDINGS	18
44.3.6.	DECKS, PATIOS, STOOPS, GAZEBOs	5	44.4.11.	POULTRY HOUSES AND BARNS	21
44.3.7.	BARBECUE	5	44.4.12.	PRE-FABRICATED STEEL BUILDINGS	22
44.3.8.	UTILITY BUILDINGS	5	44.4.13.	STEEL GRAIN BINS	23
44.3.9.	FENCES	6	44.4.14.	STEEL HOPPER BINS	23
44.3.10.	RESIDENTIAL SWIMMING POOLS	6	44.4.15.	POTATO STORAGE BUILDINGS	24
44.3.11.	TENNIS COURTS	6	44.4.16.	SLURRY SYSTEMS	24
44.4.	AGRICULTURAL OTHER BUILDINGS		44.4.17.	FEED / FENCE BUNKS	24
	AND YARD IMPROVEMENTS	7	44.4.18.	SCALES	24
44.4.1.	GENERAL PURPOSE BARNS	7			

SECTION 45. COMMERCIAL BUILDINGS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE 45-	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE 45-
45.1.	COMMERCIAL / INDUSTRIAL		45.5.	COMMERCIAL / INDUSTRIAL	
	VALUATION OVERVIEW	1		CONSTRUCTION PRICING TABLES	44
45.1.1.	COST VALUATION	1	45.5.1.	COMMERCIAL STRUCTURE PRICING	
45.1.1.1.	SELECTING THE PROPER QUALITY			TABLE	44
	GRADE	1	45.5.2.	COMMERCIAL EXTERIOR WALL	
45.1.1.2.	QUALITY GRADES AND FACTORS	2		PRICING TABLE	45
45.1.2.	INCOME VALUATION	2	45.5.3.	COMMERCIAL INTERIOR FINISH	
45.2.	COMMERCIAL / INDUSTRIAL COST			PRICING TABLE	46
	SCHEDULES	3	45.5.4.	COMMERCIAL HEATING, AIR	
45.3.	MAJOR STRUCTURAL TYPES AND			CONDITIONING, AND PLUMBING	
	GRADES	3		PRICING TABLE	47
45.4.	MANUAL PRICING INSTRUCTIONS	42			

GENERAL TABLE OF CONTENTS

GENERAL TABLE OF CONTENTS (Cont'd)

SECTION 45. COMMERCIAL BUILDINGS (Cont'd)

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 45-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 45-</u>
45.5.5.	COMMERCIAL BUILDING OTHER FEATURES PRICING TABLE	48	45.5.7.	COMMERCIAL ELEVATOR PRICING TABLES	50
45.5.6.	COMMERCIAL OTHER BUILDING AND YARD IMPROVEMENTS PRICING TABLE	49	45.5.8.	GRAIN ELEVATORS & ANNEXES	51
			45.5.9.	FLAT STORAGE	51
			45.5.10.	TANKS	51
			45.5.11.	BOLTED INDUSTRIAL BINS	51

SECTION 46. UNIT-IN-PLACE COSTS

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 46-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 46-</u>
46.1.	INTRODUCTION	1	46.6.9.	DOORS	11
46.2.	PROJECT SIZE	1	46.6.10.	COLD STORAGE INSULATION	11
46.3.	QUALITY OF CONSTRUCTION	2	46.6.11.	WINDOWS	12
46.4.	QUALITY GRADE AND FACTORS	2	46.6.12.	STAIRS	12
46.5.	DESIGN	3	46.6.13.	ROOF VENTILATION	12
46.6.	SCHEDULES	3	46.6.14.	BOILERS	13
46.6.1.	EXCAVATION AND FOUNDATION CONSTRUCTION	3	46.6.15.	STEAM GENERATORS	14
46.6.2.	CONCRETE	4	46.6.16.	WATER STORAGE TANKS	14
46.6.3.	STEEL	5	46.6.17.	STACKS	15
46.6.4.	TIMBER	5	46.6.18.	RAILROAD SIDING	15
46.6.5.	WALL CONSTRUCTION	5	46.6.19.	RAILROAD TRACK SCALES	15
46.6.6.	FLOOR CONSTRUCTION	7	46.6.20.	PAVING	15
46.6.7.	ROOF CONSTRUCTION	8	46.6.21.	TRUCK SCALES	15
46.6.8.	INTERIOR FINISH	10	46.6.22.	WOVEN WIRE FENCE	16
			46.6.23.	UTILITY PIPING	16

SECTION 47. DEPRECIATION

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 47-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE 47-</u>
47.1.	COST LEVELS	1	47.4.3.1.	OBY PERCENT GOOD GUIDELINES	8
47.2.	ECONOMIC CONDITION FACTOR	2	47.4.3.2.	OBY PERCENT GOOD CALCULATION	8
47.3.	DEVELOPING DEPRECIATION SCHEDULES	2	47.4.3.3.	ECONOMIC LIFE TABLE	9
47.3.1.	SALES RATIO ANALYSIS	2	47.4.3.4.	OBY PERCENT GOOD TABLES	12
47.3.2.	MARKET DEPRECIATION	3	47.4.4.	COMMERCIAL / INDUSTRIAL	15
47.4.	DEPRECIATION PROCEDURES	4	47.4.4.1.	COMMON CAUSES OF OBSOLESCENCE	15
47.4.1.	DWELLING	4	47.4.4.2.	ECONOMIC LIFE TABLES	16
47.4.1.1.	CDU RATING SYSTEM	4	47.4.4.3.	PHYSICAL CONDITION / FUNCTIONAL UTILITY RATING	19
47.4.1.2.	AGE AND CDU	5	47.4.4.4.	MAIN BUILDING PERCENT GOOD CALCULATION	21
47.4.1.3.	SELECTION OF A PERCENT GOOD	6	47.4.4.5.	COMMERCIAL OBY PERCENT GOOD CALCULATION	21
47.4.1.4.	EXAMPLES USING CDU	6	47.4.4.6.	COMMERCIAL PERCENT GOOD TABLES	21
47.4.2.	MOBILE HOMES	7			
47.4.3.	RESIDENTIAL AND AGRICULTURAL OTHER BUILDINGS & YARD IMPROVEMENTS	8			

GENERAL TABLE OF CONTENTS (Cont'd)

GLOSSARY

<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE G-</u>	<u>PARAGRAPH NO.</u>	<u>PARAGRAPH TITLE</u>	<u>PAGE G-</u>
G1.	ABBREVIATIONS	1	G2.	DEFINITIONS	5
G1.1.	SKETCH	1	G2.1.	ARCHITECTURAL TERMS	5
G1.2.	LAND AND LEGAL DESCRIPTIONS	2	G2.2.	DATA PROCESSING TERMS	10
G1.3.	MEASUREMENTS AND SYMBOLS	2	G2.3.	REAL ESTATE APPRAISAL TERMS	14
G1.4.	ARCHITECTURAL TERMS	3	G2.4.	STATISTICAL TERMS	23
G1.5.	GENERAL	4			

INTRODUCTION

THE MONTANA APPRAISAL MANUAL

This manual has been prepared for the use of the Montana Department of Revenue, Property Assessment Division appraisal staff. It is designed to be used in conjunction with the statewide reappraisal beginning in 1987. The data collection and appraisal procedures are specific for the 1987 reappraisal cycle, and do not apply to the maintenance of current 1982 base year values.

The appraisal manual is an integral part of the computer-assisted mass appraisal process. It provides the procedures to be followed in accurately and consistently collecting information about properties. It also presents the basic methodologies to be applied in estimating the market value of property considering the three accepted approaches to value: cost, income, and sales comparison.

The appraisal manual is organized into five parts:

PART ONE - APPRAISAL PLAN

This part outlines the plan for conducting the 1987 reappraisal cycle and implementing the new values at the conclusion of the reappraisal.

PART TWO - APPRAISAL THEORY

This part describes fundamental appraisal theory and the basis for the three commonly accepted approaches to value. It further describes the mass appraisal process, distinguishing it from the appraisal of individual properties.

PART THREE - DATA COLLECTION

This part describes the information to be collected about each property. It is organized into six sections, each dealing with a specific type of information.

As part of the mass appraisal process, information is collected on each property. A standard form, called the Data Collection Card, or Property Record Card, is used to record this information in the field. Two data collection forms have been designed for use in conjunction with this

manual. The Residential/Agricultural data collection form (RAD) and the Commercial/Industrial data collection form (CID). Some of the information on these forms is common to all properties; the portion of the form used to list data for improvements is unique to each form. Section 32 deals with the common data, Section 33, the residential improvement data, and Section 34, the commercial improvement data.

Appendixes for some of the sections contain illustrations, examples, and tables of reference data that will be useful in performing the tasks or operations that are described in the section.

Section 31 - Property Administration Data, includes ownership, legal descriptions, levy district codes, etc. It is normally supplied to the Assessor's office from other sources, e.g., deeds, subdivision maps, etc.

Section 32 - Common CAMA Data, is information that is to be collected on every property. It includes parcel identification data, site address, land breakdown information, sales data, etc.

Section 33 - Residential and Agricultural Improvements, deals with the dwelling, mobile home, and residential and agricultural outbuilding data to be collected on each property. Where necessary, you may need to refer to more detailed information provided in later sections of the manual on quality grades, outbuildings, and sketch vectoring.

Section 34 - Commercial and Industrial Improvements, discusses the information to be gathered for commercial and industrial structures.

Section 35 - Sketch Vectoring, details the procedures to be used in vectoring sketches for input to the computer. Vectors can be used to automatically calculate improvement areas and to generate sketches displayed on computer monitors or printed on computer-output reports.

INTRODUCTION

Section 36 - Income and Expense Data, describes the collection of economic information on commercial properties using the operating statement; and the transfer of this information to the Income and Expense Transfer Sheet for input into the CAMA system.

PART FOUR - REPLACEMENT COST

This part of the manual provides the specifications for the quality grades and various structure types as described in PART THREE. It also describes the procedures for applying the cost approach to estimate the market value of property.

Section 41 - Estimating Replacement Cost New, briefly describes the general steps that the appraiser must follow in determining the replacement cost of an improvement.

The next five sections describe the specific procedures for calculating replacement costs for different types of structures. Each section includes quality grade specifications, pictures to aid in the classification and grading of structures, manual pricing instructions, and pricing tables.

Section 42 - Dwellings

Section 43 - Mobile Homes

Section 44 - Residential and Agricultural Outbuildings

Section 45 - Commercial Buildings

Section 46 - Unit-in-Place Costs

Section 47 - Depreciation, describes the procedure for determining the market value using the replacement cost. It deals with the normal depreciation and economic condition factors which must be applied in adjusting the value. Depreciation tables are provided as guidelines for use with dwellings, mobile homes, residential and agricultural outbuildings, and commercial structures.

GLOSSARY

The last part of the manual contains the Glossary, which includes *Abbreviations* and *Definitions of Terms* that are used in various places and for various purposes throughout the manual.



PART ONE
APPRAISAL PLAN

This Part is to be supplied later.

PART TWO: APPRAISAL THEORY

TABLE OF CONTENTS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE
1.	RIGHTS AND THE PRINCIPLES OF VALUE	1	2.3.	APPLYING THE INCOME APPROACH	8
1.1.	BUNDLE OF RIGHTS	1	2.3.1.	INTRODUCTION	8
1.2.	THE NATURE AND MEANING OF VALUE	2	2.3.2.	THE PRINCIPLES OF CAPITALIZATION	9
1.3.	VALUE IN USE AS OPPOSED TO VALUE IN EXCHANGE	3	2.3.3.	EXPLORING THE RENTAL MARKET	9
1.4.	THE PRINCIPLE OF SUPPLY AND DEMAND	3	2.3.4.	QUESTIONS RELATING TO INCOME DATA	9
1.5.	THE PRINCIPLE OF HIGHEST AND BEST USE	3	2.3.5.	ANALYSIS OF EXPENSE DATA	10
1.6.	THE PRINCIPLE OF CHANGE	4	2.3.6.	CAPITALIZATION METHODS	11
1.7.	THE PRINCIPLE OF SUBSTITUTION	4	2.3.7.	CURRENT TECHNIQUES	12
1.8.	TRADITIONAL APPROACHES TO VALUE	4	2.3.8.	DIRECT CAPITALIZATION	12
2.	PROPERTY VALUATION TECHNIQUES	5	2.3.9.	MORTGAGE EQUITY CAPITALIZATION	12
2.1.	APPLYING THE COST APPROACH	5	2.3.10.	RESIDUAL TECHNIQUES	13
2.1.1.	REPLACEMENT COST	5	2.3.11.	MORTGAGE EQUITY METHOD	13
2.1.2.	ESTIMATING REPLACEMENT COST	6		EXAMPLE	13
2.1.3.	DEPRECIATION	6	3.	LAND VALUATION TECHNIQUES	14
2.1.4.	ESTIMATING DEPRECIATION	7	3.1.	COMPARABLE SALES METHOD	14
2.2.	APPLYING THE MARKET DATA APPROACH	7	3.2.	THE LAND RESIDUAL TECHNIQUE	15
2.2.1.	SELECTING VALID COMPARABLES	7	3.3.	RATIO METHOD	16
2.2.2.	PROCESSING COMPARABLE SALES	8	4.	MASS APPRAISING	17
			4.1.	OVERVIEW	17
			4.2.	DATA INVENTORY	19
			4.3.	PROCESSING THE DATA	22

1. RIGHTS AND THE PRINCIPLES OF VALUE

An appraisal, in itself, is nothing more than an opinion of value. This does not imply, however, that one opinion is necessarily as good as another; there are valid and accurate appraisals, and there are invalid and inaccurate appraisals. The validity of an appraisal can be measured against the supporting evidence from which it was derived, and its accuracy against that very thing it is intended to predict -- the actual behavior of the market. Each is fully contingent upon the ability of the appraiser to record adequate data and to interpret that data into an indication of value.

Appraising real property, like the solving of any problem, is an exercise in reasoning. It is a discipline, and like any discipline, it is founded on fundamental economic and social principles. From these principles evolve certain premises which, when applied to the valuation of property, serve to explain the reaction of the market. This section concerns itself with those concepts and principles basic to the property valuation process. One

cannot overstate the necessity of having a workable understanding of them.

1.1. BUNDLE OF RIGHTS

Real estate and real property are often used interchangeably. Generally speaking, real estate pertains to the real or fixed improvements to the land such as structures and other appurtenances, whereas real property encompasses all the interests, benefits and rights enjoyed by the ownership of the real estate.

Real property ownership involves the Bundle of Rights Theory which asserts that the owner has the right to enter it, use it, sell it, lease it, or give it away, as he so chooses. These rights are guaranteed by law, but they are subject to certain governmental and private restrictions.

PART 2: APPRAISAL THEORY

The Governmental restrictions are found in its power to:

- tax property.
- take property by condemnation for the benefit of the public, providing that just compensation is made to the owner (Eminent Domain).
- police property by enforcing any regulations deemed necessary to promote the safety, health, morals and general welfare of the public.
- provide for the reversion of ownership to the state in cases where a competent heir to the property cannot be ascertained (Escheat).

Private restrictions imposed upon property are often in the form of agreements incorporated into the deed. The deed also spells out precisely which rights of the total bundle of rights the buyer is acquiring. Since value is related to each of these rights, the appraiser should know precisely which rights are involved in his appraisal.

Appraisals for Ad Valorem tax purposes generally assume the property is owned in the "Fee Simple", meaning that the total bundle of rights is considered to be intact.

1.2. THE NATURE AND MEANING OF VALUE

An appraisal is an opinion or estimate of value. The concept of value is basic to the appraisal process and calls for a thorough understanding. The American Institute of Real Estate Appraisers' Appraisal Terminology Handbook, 1981 edition, offers the following definitions of value:

"The measure of value is the amount (for example, of money) which the potential purchaser probably will pay for possession of the thing desired."

"The ratio of exchange of one commodity for another, for example, one bushel of wheat in terms of a given number of bushels of corn; thus the value of one thing may be expressed in terms of another thing. Money is the common denominator by which value is measured."

"It is the power of acquiring commodities in exchange, generally with a comparison of utilities - the utility of the commodity parted

with (money) and that of the commodity acquired in the exchange (property)."

"Value depends upon the relation of an object to unsatisfied needs; that is, supply and demand."

"Value is the present worth of future benefits arising out of ownership to typical users and investors."

With these definitions, one can see that value is not an intrinsic characteristic of the commodity itself. On the contrary, value is determined by people -- created by desire, modified by varying degrees of desire and reduced by lack of desire. Throughout the definitions a relationship between the purchase and the commodity (property) is implied; this relationship is "value". A purchaser desires a property because it is a useful commodity in that it has utility. Utility is a prerequisite to value, but utility standing alone does not sufficiently cause value. If a great supply of a useful commodity exists, as for example air, needs would be automatically satisfied, desire would not be aroused, and therefore value would not be created. Therefore, besides having utility, in order to effectively arouse desire, the commodity must also be scarce.

One additional factor is necessary to complete the value equation -- the ability to become a buyer. A translation must be made of desire into a unit of exchange; a buyer must have purchasing power. The relationship is now complete: The commodity has utility and is relatively scarce, it arouses desire, and the buyer is able to satisfy that desire by trading for it, and so value is created. The question is how much value, and determining this is the job of the appraiser.

Numerous definitions of value have been offered, some simple and some complex. It would seem, though, that any valid definition of value would necessarily embody the elements of utility, desire, scarcity and purchasing power. Furthermore, the concept of value very rarely stands alone. Instead, it is generally prefixed by a descriptive term which serves to relate it to a specific appraisal purpose or activity such as "loan value". Since appraisals are made for a variety of reasons, it is important for the appraiser to clarify the specific purpose of the appraisal and the type of value which he seeks to estimate.

For Ad Valorem Tax purposes, the value sought is generally market value. The descriptive term "market" indicates the activity of buyers and sellers. MARKET VALUE is the justifiable price, or that price which an informed and intelligent buyer, fully aware of the existence of competing properties, and not being compelled to act, would be justified in paying for a particular property.

1.3. VALUE IN USE AS OPPOSED TO VALUE IN EXCHANGE

We have stated that there are a number of qualifying distinctions made in reference to the meaning of value. One of the most common and probably the most important relative to the purpose of this manual is the distinction between value in use and value in exchange. We have defined market value as a justifiable price which buyers, in general, will pay in the market. The question arises then as to the value of property which, by nature of its special and highly unique design, is useful to the present owner, but relatively less useful to buyers in the market. One can readily see that such a property's utility value may differ greatly from its potential sales price. It is even possible that no market for such a property exists. Such a property is said to have value in use which refers to the actual value of a commodity to a specific person, as opposed to value in exchange which aligns itself with market value, referring to the dollar-value of a commodity to buyers in general.

1.4. THE PRINCIPLE OF SUPPLY AND DEMAND

Among the forces which constantly operate to influence supply and demand are population growth, new techniques in transportation, purchasing power, price levels, wage rates, taxation, governmental controls, and scarcity. A sudden population growth in an area would create an increase in demand for housing. If the demand increased at a higher rate than the supply, there could soon be a scarcity of housing. If the demand was backed up by purchasing power, rentals and sale prices would tend to increase and ultimately reach a level which would tend to stimulate more builders to compete for the potential profits and thus serve to increase the supply toward the level of demand. As the supply is increased demand would begin to taper off. This would cause rentals and sale prices to level off. When builders, due to increases in labor and materials rates, are no

longer able to build cheaply enough to meet the new level of prices and rents, competition would tend to taper off and supply would level off. The cycle is then complete.

Balance occurs when reasonable competition serves to coordinate supply with demand. When competition continues unchecked to produce a volume which exceeds the demand, the net returns to investors are no longer adequate to pay all the costs of ownership, resulting in loss rather than profit and consequently, a decline in values.

A community may well support two shopping centers, but the addition of a third shopping center may increase the supply to an excess. If this occurs, one of two effects are caused; either the net dollar return to all the shopping centers will be reduced below that level necessary to support the investment, or one of the shopping centers will flourish at the others' expense.

1.5. THE PRINCIPLE OF HIGHEST AND BEST USE

The highest and best use for a property is that use which will produce the highest net return to the land for a given period of time within the limits of those uses which are economically feasible, probable and legally permissible.

On a community-wide basis, the major determining factor in highest and best use is the maximum quantity of land which can be devoted to a specific use and still yield a satisfactory return. Once a suitable basic use has been chosen for a specific property, each increment of capital investment to the existing or planned improvement will increase the net return to the land only up to a certain point; after this point is reached, the net return to the land begins to diminish. This is the point at which the land is at its highest and best use.

For example, in planning a high-rise office building, each additional upper floor represents an extra capital expenditure which must yield a certain return to the investor. This return will be dependent upon the levels of economic rent which the market will bear at the time. An optimum number of floors can be calculated above which the income yield requirements of additional expenditures will no longer be satisfactorily met. This, notwithstanding the possibility of other more

particular considerations, should determine the number of stories of the building.

Detailed analysis of this type is rarely thrust upon the property tax appraiser. Generally the tax appraiser will find the most prudent course of action is to consider the present use and follow development rather than anticipate it.

1.6. THE PRINCIPLE OF CHANGE

The impact of change on the value of real property manifests itself in the life cycle of a neighborhood. The cycle is characterized by three stages of evolution: the development and growth evidenced by improving values; the leveling off stage evidenced by static values; and finally, the stage of infiltration of decay evidenced by declining values.

The highest and best use today is not necessarily the highest and best use tomorrow. The highest and best use of the land often lies in a succession of uses. A declining single-family residential neighborhood may be ripe for multi-family, commercial or industrial development. Whether it is or not depends upon the relationship of present or anticipated future demand with existing supply.

In estimating value, the appraiser is obligated to reasonably anticipate the future benefits, as well as the present benefits derived from ownership and to evaluate the property in light of the quality, quantity, and duration of these benefits based on actual data as opposed to speculative or potential benefits which may or may not occur.

1.7. THE PRINCIPLE OF SUBSTITUTION

Value is created by people in the market place. It is the function of translating demand into a commodity of exchange. When the benefits and advantages derived from two properties are equal, the lowest priced property receives the greatest demand, and rightfully so. The informed buyer is not justified in paying anything more for a property than it would cost to acquire an equally desirable property. That is to say that the value of a property is established as that amount for which equally desirable comparable properties are being bought and sold in the market. Herein lies an approach to value ... and the basis of the valuation process.

1.8. TRADITIONAL APPROACHES TO VALUE

In the preceding paragraphs, it has been stated that value is an elusive item that occurs in many different forms, and that the forces and influences which combine to create, sustain, or destroy value are numerous and varied. It is the appraiser's function to define the type of value sought, to compile and to analyze all related data, and giving due consideration to all the factors which may influence the value, to process and translate that data into a final opinion or estimate of value. This he must do for each property he is to appraise.

The processing of this data into a conclusion of value generally takes the form of three recognized approaches to value: Cost Approach, Market Data Approach, and Income Approach. Underlying each of the approaches is the principle that the justifiable price of a property is no more than the cost of acquiring and/or reproducing an equally desirable substitute property. The use of one or all three approaches in the valuation of a property is determined by the quantity, quality, and accuracy of the data available to the appraiser.

The COST APPROACH involves making an estimate of the depreciated cost of reproducing or replacing the building and site improvements. Reproduction Cost refers to the cost at a given point in time of reproducing a replica property, whereas Replacement Cost refers to the cost of producing improvements of equal utility. Depreciation is deducted from this cost new for loss in value caused by physical deterioration, and functional or economic obsolescence. To this depreciated cost is added the estimated value of the land, resulting in an indication of value derived by the Cost Approach.

The significance of the Cost Approach lies in its extent of application ... it is the one approach that can be used on all types of construction. It is a starting point for appraisers, and therefore it is a very effective "yardstick" in any equalization program for Ad Valorem taxes. Its widest application is in the appraisal of properties where the lack of adequate market and income data preclude the reasonable application of the other traditional approaches.

The MARKET DATA APPROACH involves the compiling of sales and offerings of properties which are comparable to the property being appraised. These sales and offerings are then adjusted for any dissimilarities, and a value range obtained by comparison of said properties. The approach is reliable to the extent that the properties are comparable, and the appraiser's judgment of proper adjustments is sound. The procedure for using this approach is essentially the same for all types of property with the only difference being the elements of comparison.

The significance of this approach lies in its ability to produce estimates of value which directly reflect the attitude of the market. Its application is contingent upon the availability of comparable sales, and therefore finds its widest range in the appraisal of vacant land and residential properties.

The INCOME APPROACH measures the present worth of the future benefits of a property

by the capitalization of the net income stream over the remaining economic life of the property. The approach involves making an estimate of the "effective gross income" of a property, derived by deducting the appropriate vacant and collection losses from its estimated economic rent, as evidenced by the yield of comparable properties. From this figure then is deducted applicable operating expenses, insurance, and reserve allowances for replacements resulting in an estimate of net income, which may then be capitalized into an indication of value.

The approach obviously has its basic application in the appraisals of properties universally bought and sold on their ability to generate and maintain a stream of income for their owners. The effectiveness of the approach lies in the appraiser's ability to relate to the changing economic environment and to analyze income yields in terms of their relative quality and durability.

2. PROPERTY VALUATION TECHNIQUES

2.1. APPLYING THE COST APPROACH

If the highest and best use of a property is its present use, a valid indication of value may be derived by estimating the value of the land, and adding the land value to the depreciated value of the structures on the land; the resulting equation being...

$$\begin{array}{rcl}
 & \text{Estimated Land Value} & \\
 + & \text{Estimated Replacement Cost New of} & \\
 & \text{Structures} & \\
 - & \text{Estimated Depreciation} & \\
 \hline
 = & \text{Indication of Property Value} &
 \end{array}$$

Since estimating the land value is covered in a separate section, this section will address itself to the two remaining elements, Replacement Cost and Depreciation.

2.1.1. Replacement Cost

Replacement Cost is the current cost of producing an improvement of equal utility to the subject property; it may or may not be the cost of reproducing a replica property. The distinction being drawn is one between Replacement Cost, which refers to a substitute property of equal

utility, as opposed to Reproduction Cost, which refers to a substitute replica property. In a particular situation the two concepts may be interchangeable, but they are not necessarily so. They both, however, have application in the Cost Approach to value, the difference being reconciled in the consideration of depreciation allowances.

In actual practice, outside of a few historic type communities in this country, developers and builders, for obvious economic reasons, replace buildings, not reproduce them. It logically follows that if an appraiser's job is to measure the actions of knowledgeable persons in the market place, the use of proper replacement costs should provide an accurate point of beginning in the valuation of most improvements.

The replacement cost includes the total cost of construction incurred by the builder whether preliminary to, during the course of, or after completion of the construction of a particular building. Among these are material, labor, all subcontracts, builders' overhead and profit, architectural and engineering fees, consultation fees, survey and permit fees, legal fees, taxes, insurance, and the cost of interim financing.

PART 2: APPRAISAL THEORY

2.1.2. Estimating Replacement Cost

There are various methods that may be employed to estimate replacement cost new. The methods widely used in the appraisal field are the quantity-survey method, the unit-in-place or component part-in-place method, and the model method.

The Quantity-Survey Method involves a detailed itemized estimate of the quantities of various materials used, labor and equipment requirements, architect and engineering fees, contractor's overhead and profit, and other related costs. This method is primarily employed by contractors and cost estimators for bidding and budgetary purposes and is much too laborious and costly to be effective in every day appraisal work, especially in the mass appraisal field. The method, however, does have its place in that it is used to develop certain unit-in-place costs which can be more readily applied to estimating for appraisal purposes.

The Unit-in-Place Method is employed by establishing in-place cost estimates (including material, labor, overhead and profit) for various structural components. The prices established for the specified components are related to their most common units of measurement such as cost per yard of excavation, cost per lineal foot of footings, and cost per square foot of floor covering.

The unit prices can then be multiplied by the respective quantities of each as they are found in the composition of the subject building to derive the whole dollar component cost, the sum of which is equal to the estimated cost of the entire building, providing of course, that due consideration is given to all other indirect costs, which may be applicable. This component part-in-place method of using basic units can also be extended to establish prices for larger components in-place such as complete structural floors (including the finish flooring, sub-floor, joists and framing) which are likely to occur repeatedly in a number of buildings.

The Model Method is still a further extension, in that Unit-in-Place costs are used to develop base unit square foot or cubic foot costs for total specified representative structures in place, which may then serve as "models" to derive the base unit cost of comparable structures to be appraised. The base unit cost of the model most representative of the subject building is applied to the subject

building and appropriate tables of additions and deductions are used to adjust the base cost of the subject building to account for any significant variations between it and the model.

Developed and applied properly, these pricing techniques will assist the appraiser in arriving at valid and accurate estimates of replacement cost new as of a given time. That cost generally represents the upper limit of value of a structure. The difference between its replacement cost new and its present value is depreciation. The final step in completing the Cost Approach then is to estimate the amount of depreciation and deduct said amount from the replacement cost new.

2.1.3. Depreciation

Simply stated, depreciation can be defined as "a loss in value from all causes." As applied to real estate, it represents the loss in value between market value and the sum of the replacement cost new of the improvements plus the land value as of a given time. The causes for the loss in value may be divided into three broad classifications: Physical Deterioration, Functional Obsolescence, and Economic Obsolescence.

Physical Deterioration pertains to the wearing out of the various building components, referring to both short-life and long-life terms, through the action of the elements, age, and use. The condition may be considered either "curable" or "incurable", depending upon whether it may or may not be practical and economically feasible to cure the deficiency by repair and replacement.

Functional Obsolescence is a condition caused by either inadequacies or over-adequacies in design, style, composition, or arrangement inherent to the structure itself, which tends to lessen its usefulness. Like physical deterioration, the condition may be considered either curable or incurable. Some of the more common examples of functional obsolescence are excessive wall and ceiling heights, excessive structural construction, surplus capacity, ineffective layouts, and inadequate building services.

Economic Obsolescence is a condition caused by factors extraneous to the property itself, such as changes in population characteristics and economic trends, encroachment of inharmonious land uses, excessive taxes, and governmental restrictions. The condition is generally incurable in that the causes lie outside the property owner's realm of control.

2.1.4. Estimating Depreciation

An estimate of depreciation represents an opinion of the appraiser as to the degree that the present and future appeal of a property has been diminished by deterioration and obsolescence. Of the three estimates necessary to the cost approach, it is the one most difficult to make. The accuracy of the estimate will be a product of the appraiser's experience in recognizing the symptoms of deterioration and obsolescence and the ability to exercise sound judgment in equating all observations to the proper monetary allowance to be deducted from the replacement cost new. There are several acceptable methods which may be employed:

Physical deterioration and/or functional obsolescence can be measured by observing and comparing the physical condition and/or functional deficiencies of the subject property as of a given time with either an actual or hypothetical, comparable, new and properly planned structure.

Curable physical deterioration and functional obsolescence can be measured by estimating the cost of restoring each item of depreciation to a physical condition as good as new, or estimating the cost of eliminating the functional deficiency.

Functional and economic obsolescence can be measured by capitalizing the estimated loss in rental due to the structural deficiency or lack of market demand.

Total accrued depreciation may be derived by first estimating the total useful life of a structure and then translating its present condition, desirability, and usefulness into an effective age (rather than an actual age) which would represent that portion of its total life (percentage) which has been used up.

Total accrued depreciation may also be estimated by deriving the amount of depreciation recognized by purchasers as evidenced in the prices paid for the property in the market place; the loss of value being the difference between the cost of replacing the structure new and its actual selling price (total property selling price less the estimated value of the land).

2.2. APPLYING THE MARKET DATA APPROACH

An indication of the value of a property can be derived by analyzing the selling prices of comparable properties. The use of this technique, often referred to as the "comparison approach" or "comparable sales approach", involves the selection of a sufficient number of valid comparable sales and the adjustment of each sale to the subject property to account for variations in time, location, site and structural characteristics.

2.2.1. Selecting Valid Comparables

Since market value has been defined as the price which an informed and intelligent buyer, fully aware of the existence of competing properties and not being compelled to act is justified in paying for a particular property, it follows that if market value is to be derived from analyzing comparable sales, that the sales must represent valid "arms length" transactions. Due consideration must be given to the conditions and circumstances of each sale before selecting the sales for analysis. Some examples of sales which do not normally reflect valid market conditions are as follows:

Sales in connection with foreclosures, bankruptcies, condemnations and other legal action.

Sales to or by federal, state, county and local governmental agencies.

Sales to or by religious, charitable or benevolent tax exempt agencies.

Sales involving family transfers, or "love and affection."

Sales involving intra-corporate affiliations.

Sales involving the retention of life interests.

Sales involving cemetery lots.

Sales involving mineral or timber rights, and access or drainage rights.

Sales involving the transfer of part interests.

PART 2: APPRAISAL THEORY

In addition to selecting valid market transactions, it is equally important to select properties which are truly comparable to the property under appraisal. For instance, sales involving both real property and personal property or chattels may not be used unless the sale can be adjusted to reflect only the real property transaction, nor can sales of non-operating or deficient industrial plants be validly compared with operating plants. The comparables and subject properties must exhibit the same use, and the site and structural characteristics must exhibit an acceptable degree of comparability.

2.2.2. Processing Comparable Sales

All comparables must be adjusted to the subject property to account for variations in time and location. The other major elements of comparison will differ depending upon the type of property being appraised. In selecting these elements, the appraiser must give prime consideration to the same factors which influence the prospective buyers of particular types of properties.

The typical home buyer is interested in the property's capacity to provide the family with a place to live. A primary concern is with the living area, utility area, number of rooms, number of baths, age, structural quality and condition, the presence of a modern kitchen and recreational conveniences of the house. Equally important is the location and neighborhood, including the proximity to and the quality of schools, public transportation, and recreational and shopping facilities.

In addition to the residential amenities, the buyer of agricultural property is primarily interested in the productive capacity of the land, the accessibility to the market place, and the condition and functional utility of the farm buildings and structures on the land.

The typical buyer of commercial property, including warehouses and certain light industrial plants, is primarily concerned with its capability to produce revenue. Of special interest will be the age, design and structural quality and condition of the improvements, the parking facilities, and the location relative to transportation, labor markets and trade centers.

In applying the market data approach to commercial/industrial property, the appraiser will

generally find it difficult to locate a sufficient number of comparable sales, especially of properties which are truly comparable in their entirety. It will, therefore, generally be necessary to select smaller units of comparison such as price per square foot, per unit, per room, etc. In doing so, great care must be exercised in selecting a unit of comparison that represents a logical common denominator for the properties being compared. A unit of comparison which is commonly used and proven to be fairly effective is the Gross Rent Multiplier, generally referred to as G.R.M. which is derived by dividing the gross annual income into the sales price. Using such units of comparison enables the appraiser to compare two properties which are similar in use and structural features, but differ significantly in size and other characteristics.

Having selected the major factors of comparison, it remains for the appraiser to adjust each of the factors to the subject property. In comparing the site, adjustments for size, location, accessibility, and site improvements must be made. In comparing the structures, adjustments for size, quality, design, condition, and significant structural and mechanical components also must be made. The adjusted selling prices of the comparable properties will establish a range in value in which the value of the subject property will fall. Further analysis of the factors should enable the appraiser to narrow the range down to the value level which is most applicable to the subject property.

2.3. APPLYING THE INCOME APPROACH

2.3.1. Introduction

The justified price paid for income producing property is no more than the amount of investment required to produce a comparably desirable return; and since the market can be analyzed in order to determine the net return actually anticipated by investors, it follows that the value of income producing property can be derived from the income which it is capable of producing. What is involved is an estimate of income through the collection and analysis of available economic data, the development of a property capitalization rate, and the processing of the net income into an indication of value by employing one or more of the acceptable capitalization methods and techniques.

2.3.2. The Principles of Capitalization

Capitalization is the process for converting the net income produced by property into an indication of value. Through the years of appraisal history, a number of procedures have been recognized and employed by appraisal authorities in determining the value of real estate by the income approach. Although present-day practice recommends only certain methods, we will at least touch on the other approaches to value - even though they may not be accepted in today's appraisal scene because they do not accurately reflect the current market conditions.

2.3.3. Exploring the Rental Market

The starting point for the appraiser is an investigation of current economic rent in a specific area in order to establish a sound basis for estimating the gross income which should be returned from competitive properties. The appraiser must make a distinction between economic rent or the rent which property is normally expected to produce on the open market, as opposed to control rent or the rent which property is actually realizing at the time of the appraisal due to lease terms established some time in the past.

The first step then is to obtain specific income and expense data on properties which best typify normal market activity. The data is necessary to develop local guidelines for establishing the economic rent and related expenses for various types of properties.

The next step is to similarly collect income and expense data on individual properties, and to evaluate the data against the established guidelines.

The collection of income and expense data (I & E) is an essential phase in the valuation of commercial properties. The appraiser is primarily concerned with the potential earning power of the property. The objective is to estimate its expected net income. Income and Expense Statements of past years are valuable only to the extent which they serve this end. The statements must not only be complete and accurate, but must also stand the test of market validity. Consideration of the following factors should assist the appraiser in evaluating the I & E data in order to arrive at an accurate and realistic estimate of net income.

2.3.4. Questions Relating to Income Data

- Was the reported income produced entirely by the subject property? Very often the rental will include an amount attributable to one or more additional parcels of real estate. In this case, it would be necessary to obtain the proper allocations of rent.
- Was the income attributable to the subject property as it physically existed at the time of the appraisal, or did the appraisal include the value of leasehold improvements and remodeling for which the tenant paid in addition to rent? If so, it may be necessary to adjust the income to reflect economic rent.
- Does the reported income represent a full year's return? It is often advisable to obtain both monthly and annual amounts as a cross-check.
- Does the income reflect current economic rent? Is either part or all of the income predicated on old leases? If so, what are the provisions for renewal options and rates?
- Does the reported income reflect 100% occupancy? What percentage of occupancy does it reflect? Is this percentage typical of this type of property, or is it due to special non-recurring causes?
- Does the income include rental for all marketable space? Does it include an allowance for space, if any, which is either owner or manager occupied? Is the allowance realistic?
- Is the income attributable directly to the real estate and conventional amenities? Is some of the income derived from furnishings and appliances? If so, it will be necessary to adjust the income or make provisions for reserves to eventually replace them, whichever local custom dictates.
- In many properties an actual rental does not exist because the real estate is owner occupied. In this event it is necessary to obtain other information to provide a basis to estimate economic rent. The information required pertains to the business operation using the property. Proper analysis of the annual operating statements of the business, including gross sales or receipts, can provide an accurate

PART 2: APPRAISAL THEORY

estimate of economic rent. Information requirements for a few of the more common property uses are as follows:

Retail Stores: The annual net gross sales. (Gross sales less returned merchandise)

Hotels and Motels: The annual operating statement of the business. If retail or office space is leased in these properties, obtain the actual rent paid.

Theaters: The annual gross receipts (including admissions and concessions) and seating capacity.

Automobile Parking: The annual gross receipts.

2.3.5. Analysis of Expense Data

The appraiser must consider only those expenses which are applicable to the cost of ownership; that is, those expenses which are normally owner incurred. Any portion of the expenses incurred directly or indirectly by the tenant should not be considered. Each expense item must stand the test of both legitimacy and accuracy. How do they compare with the established guidelines and norms? Are they consistent with the expenses incurred by comparable properties?

Management refers to the cost of administration. These charges should realistically reflect what a real estate management company would actually charge to manage the property. If no management fee is shown on the statement, a proper allowance must be made by the appraiser. On the other hand, if excessive management charges are reported, as is often the case, the appraiser must disregard the reported charges and use an amount which he deems appropriate and consistent with comparable type properties. The cost of management bears a relationship with the risk of ownership and will generally range between 4 to 10% of the gross income.

General expenses may include such items as the cost of services and supplies not charged to a particular category. Unemployment and F.I.C.A. taxes, Workmen's Compensation, and other employee insurance plans are usually legitimate deductions when employees are a part of the building operation.

Reimbursed expenses refer to the cost associated with the maintenance of public or common areas of the commercial property. This expense is passed on to the tenants and should, therefore, only be considered when the amount of reimbursement is included as income.

Miscellaneous expenses is the "catch-all" category for incidentals. This item should reflect a very nominal percentage of the income. If expenses reported seem to be excessive, the appraiser must examine the figures carefully in order to determine if they are legitimate expenses, and if so, to allocate them to their proper category.

Cleaning expenses are legitimate charges. They are for such items as general housekeeping and maid service, and include the total cost of labor and related supplies. All or a portion of the cleaning services may be provided by outside firms working on a "contract" basis. Cleaning expenses vary considerably and are particularly significant in operations such as offices and hotels. "Rule of thumb" norms for various operations are made available through national management associations. The appraiser should have little difficulty in establishing local guidelines.

Utilities are generally legitimate expenses and if reported accurately, need very little reconstruction by the appraiser, other than to determine if the charges are consistent with comparable properties. Local utility companies can provide the appraiser with definition guidelines.

Heat and Air Conditioning costs are often reported separately and in addition to utilities. The expenses would include the cost of fuel other than the above mentioned utilities, and may include, especially in large installations, the cost of related supplies, inspection fees, and maintenance charges. These are generally legitimate costs, and the same precautions prescribed for "utilities" are in order.

Elevator expenses, including the cost of repairs and services, are legitimate deductions, and are generally handled through service contracts. These fees can generally be regarded as fairly stable annual recurring expenses.

Decorating and minor alterations are necessary to maintain the income stream of many commercial properties. In this respect they are legitimate expenses. However, careful scrutiny of these

figures is required. Owners tend to include the cost of major alterations and remodeling which are, in fact, capital expenditures, and as such are not legitimate operating expenses.

Repairs and Maintenance expenses reported for any given year may not necessarily be a true indication of the average or typical annual expense for these items. For example, a statement could reflect a substantial expenditure for a specific year (possibly because the roof was replaced and/or several items of deferred maintenance were corrected); yet the statement for the following year may indicate that repairs and maintenance charges were practically nil. It is necessary for the appraiser to either obtain complete economic history on each property in order to make a proper judgment as to the average annual expense for these items, or include a proper allowance based on norms for the type and age of the improvements to cover annual expenses. Since it is neither possible nor practical to obtain enough economic history on every property, the latter method is generally used and the amounts reported for repairs and maintenance are then estimated by the appraiser.

Insurance. Caution must be used in accepting insurance expense figures. Cost shown may be for more than one year, or may be for blanket policies including more than one building. It is generally more effective for the appraiser to establish his own guidelines for insurance. He must also be careful to include only items applicable to the real estate. Fire extended coverage and owner's liability are the main insurance expense items. Separate coverages on special component parts of the buildings, such as elevators and plate glass, are also legitimate expenses.

Real Estate Taxes. In making appraisals for tax purposes, the appraiser must exclude the actual amount reported for real estate taxes. Since future taxes will be based on his appraised value, the appraiser must express the taxes as a factor of the estimated value. This can be done by including an additional percentage in the capitalization rate to account for real estate taxes.

Depreciation. The figure shown for depreciation on an operating statement is a "bookkeeping figure" which the owner uses for Internal Revenue purposes and should not be considered in the income approach. This reflects a

tax advantage which is one of the benefits of ownership.

Interest. Although interest is considered a legitimate expense, it is always included in the Capitalization Rate. Most property is appraised as if it were "free and clear"; however, the appraiser does consider the interest of a current mortgage in the Capitalization Rate build-up.

Land Rent. When appraising for real estate tax purposes, only the sum of the leasehold and the leased fee is usually considered. Land rent is not deducted as an expense. Considered separately, rent from a ground lease would be an expense to the leasehold interest and an income to the leased fee. However, if land were rented from another property to supply additional parking for example, that land rent would be an allowable expense.

It is obvious that there are some expense items encountered on operating statements that the appraiser should not consider as allowable. This is because he is interested in legitimate cash expenses only. Income statements are usually designed for income tax purposes where credit can be taken for borrowing costs and theoretical depreciation losses.

It is virtually impossible and certainly not always practical to obtain a complete economic history on every commercial property being appraised. On many properties, however, detailed economic information can be obtained through the use of Income and Expense forms. One must realistically recognize the fact that the data obtainable on some properties is definitely limited.

In most cases, the gross income and a list of the services and amenities furnished can be obtained during the data gathering operation. However, in order to insure a sound appraisal, it may be necessary to estimate the fixed and operating expenses. This is best accomplished by setting guidelines for expenses, based on a percent of Effective Gross Income or a cost per square foot of leasable area. These percentages or costs will vary depending on the services supplied and the type of property.

2.3.6. Capitalization Methods

The most prominent methods of capitalization are Direct, Straight Line, Sinking Fund, and Annuity. Each of these is a valid method for capitalizing income into an indication of value.

The basis for their validity lies in the action of the market, which indicates that the value of income producing property can be derived by equating the net income with the net return anticipated by informed investors. This can be expressed in terms of a simple equation:

$$\text{Value} = \frac{\text{Net Income}}{\text{Capitalization Rate}}$$

The Straight Line and Sinking Fund methods are both actual forms of Straight Capitalization, with one using Straight Line recapture and the other using Sinking Fund recapture. Both methods follow the same basic principles as Direct Capitalization, differing only in that they provide for separate capitalization rates for land and building; the building rate differing from the land rate in that it includes an allowance for recapture.

Straight Line Capitalization allows for "recapture" based on remaining economic life of the building - implying that at the end of that period of time, there would be a zero improvement value. There are three fallacies in this thinking. First, the potential buyer (investor) has no intention of holding the property that long. The average investment period might average ten years. Second, the investor anticipates that at the end of that period he will either get all his money back or will make a profit. And third, is the depreciation allowance possible in connection with federal income taxes.

Depreciation allowances begin to "run out" between seven and ten years, so the advantages of owning the property are reduced considerably. A prudent owner may choose to sell the property at this point and re-invest in another property so that he may begin the depreciation cycle again and continue to take full advantage of the favorable tax laws.

For these reasons, the Straight Line Capitalization Method does not usually follow what the market indicates.

Straight Line recapture calls for the return of investment capital in equal increments or percentage allowances spread over the estimated remaining economic life of the building.

Sinking Fund recapture calls for the return of invested capital in one lump sum at the

termination of the estimated remaining economic life of the building. This is accomplished by providing for the annual return of a sufficient amount needed to invest and annually re-invest in "safe" interest-bearing accounts, such as government bonds or certificates of deposit, which will ultimately yield the entire capital investment during the course of the building's economic life.

Annuity Capitalization lends itself to the valuation of long-term leases. In this method, the appraiser determines, by the use of annuity tables, the present value of the right to receive a certain specified income over a stipulated duration of the lease. In addition to the value of the income stream, the appraiser must also consider the value that the property will have once it reverts back to the owner at the termination of the lease. This reversion is valued by discounting its anticipated value against its present day worth. The total property value then is the sum of the capitalized income stream plus the present worth of the reversion value.

2.3.7. Current Techniques

There are two methods, however, that do lend themselves to an accurate measure of market value based on potential income. These are Direct Capitalization, utilizing the Direct Comparison Method of Rate Selection, and Mortgage Equity Capitalization.

2.3.8. Direct Capitalization

In Direct Capitalization, the appraiser determines a single "overall" capitalization rate. This is done by analyzing actual market sales of similar types of properties. He develops the net income of each property, and divides the net income by the sales price to arrive at an overall rate to provide an indication of value.

2.3.9. Mortgage Equity Capitalization

Mortgage Equity Capitalization is a form of direct capitalization with the major difference in the two approaches being the development of the overall capitalization rate.

In this method, equity yields and mortgage terms are considered influencing factors in construction of the interest rate. In addition, a plus or minus adjustment is required to compensate for anticipated appreciation or

depreciation. This adjustment can be related to the recapture provisions used in other capitalization methods and techniques.

2.3.10. Residual Techniques

It can readily be seen that any one of the factors of the Capitalization Equation (Value = Net Income divided by Capitalization Rate) can be determined if the other two factors are known. Furthermore, since the value of property is the sum of the land value plus the building value, it holds that either of these can be determined if the other is known. The uses of these mathematical formulas in capitalizing income into an indication of value are referred to as the residual techniques, or more specifically, the property residual, the building residual, and the land residual techniques.

The Property Residual Technique is an application of Direct Capitalization. In this technique, the total net income is divided by an overall capitalization rate (which provides for the return on the total investment) to arrive at an indicated value for the property. This technique has received more popular support in recent years because it closely reflects the market. With this technique, the capitalization rate may be developed by either "direct comparison" in the market or by the Mortgage Equity Method.

The Building Residual Technique requires the value of the land to be a known factor. The amount of net income required to earn an appropriate rate of return on the land investment is deducted from the total net income. The remainder of the net income (residual) is divided by the building capitalization rate (which is composed of a percentage for the return on the investment, a percentage for the recapture of the investment and an effective tax rate) to arrive at an indicated value for the building.

The Land Residual Technique requires the value of the building to be a known factor. The amount of net income required to provide both a proper return on and the recapture of the investment is deducted from the total net income. The remainder of the net income (residual) is then divided by the land capitalization rate (which is composed of a percentage for the return on the investment, plus an effective tax rate) to arrive at an indicated value for the land.

2.3.11. Mortgage Equity Method Example

For purposes of illustration, assume an investment financed with a 70% loan at 14.0% interest. The term of the mortgage is 20 years, paid off in level monthly payments. The total annual cost for principal and interest on such a loan can be determined by referring to the mortgage equity tables. Select the Constant Annual percent for an interest rate of 14.0% and a term of 20 years. Note that the constant is 14.92% of the amount borrowed, or .92% more than the interest rate alone.

Assume that the equity investor will not be satisfied with less than an 18% yield. The income necessary to satisfy both Lender and Equity can now be shown. The product of the percent portion and the rate equals the weighted rate. The total of each weighted rate equals the weighted average.

	Portion	Rate	Weighted Rate
Mortgage loan (principal interest)	70%	.1492	= .1044
Equity (down payment)	30%	.18	= .0540
Weighted Average	100%		.1584

Note that the "constant annual percent" is used for the rate of the loan.

Since there is a gain in equity's position through the years by the loan being paid off little by little, it is necessary to calculate the credit for "Equity Build-Up". Assume that the investor plans to hold the property for ten years. Since the mortgage is for 20 years, only a portion of the principal will be paid off and this amount must be discounted, as it won't be received for ten years. From the Table of Loan Balance and Debt Reduction, at the end of ten years for a 20 year mortgage at 14%, the figure is .199108. Consulting the sinking fund tables indicates that the discount factor for 18% and 10 years is .0425.

The credit for Equity Build-Up can now be deducted from the basic rate, thus: (% of loan paid in 10 yrs.) x (loan rate) x (sinking fund 18% for 10 yrs.)

Weighted Average	.1584
-.199108 x 70% x .0425	= .0059
Resulting Net Rate	= .1525

3. LAND VALUATION TECHNIQUES

In making appraisals for Ad Valorem Tax purposes, it is generally necessary to estimate separate values for the land and the improvements on the land. In actuality, the two are not separated and the final estimate of the property as a single unit must be given prime consideration. However, in arriving at that final estimate of value, aside from the requirements for property tax appraisals, there are certain other reasons for making a separate estimate of value for the land:

- An estimate of land value is required in the application of the Cost Approach.
- An estimate of land value is required to be deducted from the total property selling price in order to derive indications of depreciation through market-data analysis. (Depreciation being equal to the difference between the replacement cost new of a structure and the actual price paid in the market place for the structure.)
- As land is not a depreciable item, a separate estimate of land value is required for bookkeeping and accounting purposes; likewise, the total capitalization rate applicable to land will differ from the rate applicable to the improvements on the land.
- Since land may or may not be used to its highest potential, the value of land may be completely independent of the existing improvements on the land.
- Real Estate is valued in terms of its highest and best use. The highest and best use of the land (or site), if vacant and available for use, may be different from the highest and best use of the improved property. This will be true when the improvement is not an appropriate use and yet makes a contribution to total property value in excess of the value of the site. Highest and Best Use (Highest and Most Profitable Use; Optimum Use) is that reasonable and probable use which will support the highest present value as of the date of the appraisal. Alternatively, it is the most profitable likely use to which a property can be put. It may be measured in terms of the present worth of the highest net return that the property can be expected to

produce over a stipulated long run period of time.[1]

- As appraiser's opinions are based on data derived from the market, it is necessary to study and adapt, if possible, procedures used by those closest to everyday transactions.

3.1. COMPARABLE SALES METHOD

The most frequently used method in estimating the value of land is the comparable sales method in which land values are derived from analyzing the selling prices of similar sites. This method is in essence the application of the market data approach to value and all the considerations pertaining thereto are equally applicable here.

The appraiser must select comparable and valid market transactions, and must weigh and give due consideration to all the factors significant to value, adjusting each to the subject property. The comparable sites must be used in the same way as is the subject property, and subjected to the same zoning regulations and restrictions. It is also preferable, whenever possible, to select comparables from the same or a similar neighborhood. The major adjustments will be to account for variations in time, location, and physical characteristics to include size, shape, topography, landscaping, access, as well as other factors which may significantly influence the selling price, such as the productivity of farm land.

Although it is always preferable to use sales of unimproved lots for comparables, it is not always possible to do so. Older neighborhoods are not likely to yield a sufficient number of representative sales of unimproved lots to permit a valid analysis. In such cases, in order to arrive at an estimate of land values using the comparable sales approach, it is necessary to consider improved property sales and to estimate the portion of the selling price applicable to the structure. The procedure would be to estimate the replacement cost of the buildings as of the date of sale, estimate the accrued depreciation and deduct that amount from

[1] American Institute of Real Estate Appraisers' Appraisal Terminology Handbook, 1981 edition.

the replacement cost. The resulting estimated selling price of the buildings can be deducted from the total selling price of the property to derive the portion of the selling price which can be allocated to the land. The equation is as follows:

$$S - V_b = V_L$$

where:

S = Selling Price of Property
 V_b = Estimated Depreciated Value of Buildings
 V_L = Indication of Land Value

In some older neighborhoods, vacant lots will exist often as a result of fire or normal deterioration. Since the desirability as a new building site is restricted, value is generally determined by adjoining property owners who have a desire for additional land area.

In order to apply the comparable sales method, it is first necessary to establish a common unit of comparison. The units generally used in the valuation of land are price per front foot, price per square foot, price per acre, price per apartment unit, and price per motel unit. The selection of any one particular unit depends upon the type of property being appraised ... frontage being commonly used for platted, uniform type residential lots, and square footage and acreage for larger, unplatted tracts, as well as irregularly shaped lots lacking in uniformity. Use of square footage is especially desirable in Central Business Districts where the entire lot maintains the same level of value: depth factor adjustments have a tendency to distort this concept. Commercial arteries are also best valued on a square foot basis.

The utility of a site will vary with the frontage, width, depth, and overall area. Similarly, the unit land values should be adjusted to account for differences in size and shape between the comparables and the subject property. Since such an adjustment is generally necessary for each lot, it is beneficial that the appraiser adopt and/or develop standardized procedures for adjusting the lot size and the unit values to account for the variations. It is not uncommon for all lots within a development to market at the same price. Should data indicate this, it is necessary to make alterations or adjustments to maintain this value level. In some cases, a "site value" concept has advantages. Some of the techniques commonly employed are:

- Standard lot sizing techniques provide for the adjustment of the frontage, width, and depth of irregular shaped lots to make the units of measurement more comparable with uniform rectangular lots.
- Standard Depth Tables provide for the adjustment of front foot unit values to account for variations in depth from a predetermined norm.
- Frontage Tables provide for the adjustment of front footage unit values to account for variations in the relative utility value of excessive or insufficient frontage as compared to a predetermined norm.
- Acreage or Square Footage Tables provide for the adjustment of unit values to account for variations in the relative utility value of excessive or insufficient land sizes as compared to a predetermined norm.

During the process of adjusting the comparable sales to account for variations between them and the subject property, the appraiser must exercise great care to include all significant factors and to properly consider the impact of each of the factors upon the total value. If done properly, the adjusted selling prices of the comparable properties will establish a range in value in which the value of the subject property will fall. Further analysis of the factors should enable the appraiser to narrow the range down to the value level which is most applicable to the subject property.

3.2. THE LAND RESIDUAL TECHNIQUE

In the absence of sufficient market data, income producing land may be valued by determining the portion of the net income attributable to the land and capitalizing the net income into an indication of value. The procedure is:

1. Determine the highest and best use of the land, which may be either its present use or hypothetical use.
2. Estimate the net income which the property can be expected to yield.
3. Estimate the replacement cost new of the improvements.

PART 2: APPRAISAL THEORY

4. If the case involves the present use, estimate the proper allowance for depreciation, and deduct that amount from the replacement cost new of the improvements to arrive at an estimate of their depreciated value.
5. Develop appropriate capitalization rates.
6. Calculate the income requirements of the improvements, and deduct the amount from the total net income to derive that portion of the income which can be said to be attributable to the land.
7. Capitalize the residual income attributable to the land to an indication of value.

3.3. RATIO METHOD

A technique useful for establishing broad indications of land values is a "typical" allocation or ratio method. In this technique, the ratio of the land value to the total value of improved properties is observed in situations where there is good market and/or cost evidence to support both the land values and total values. This market abstracted ratio is then applied to similar properties where the total values are known, but the allocation of values between land and improvements are not known. The ratio is usually expressed as a percentage which represents the portion of the total improved value that is land value, or as a formula:

$$\frac{V_1}{V_2} \times 100\% = V_3$$

where:

- V_1 = Total Land Value
 V_2 = Total Property Value
 V_3 = Percent Land is of Total Property Value

This technique can be used on most types of improved properties, with important exceptions being farms and recreational facilities, provided that the necessary market and/or cost information is available. In actual practice, available market information limits this technique primarily to residential properties, and to a much lesser extent, commercial and industrial properties such as apartments, offices, shopping centers, and warehouses.

The ratio technique cannot give exact indications of land values. It is nevertheless useful, especially when used in conjunction with other techniques of estimating land values because it provides an indication of the reasonableness of the final estimate of land value.

The ratio should be extracted from available market information and applied to closely similar properties. It should be noted that any factor that affects values may also affect the ratio of values. Zoning is particularly important because it may require more or less improvements be made to the land, or may require a larger or smaller minimum size. This tends to have a bearing on the land values, and so it may also influence the ratio of values considerably from community to community.

The following is an example of a residential land valuation situation.

Market information derived from an active new subdivision:

Typical Lot Sale Price (most lots equivalent)	\$15,000
Improved Lot Sales (range)	\$65,000 to \$75,000
Indicated Ratio	$\frac{\$15,000}{\$75,000}$ to $\frac{15,000}{65,000} \times 100\% = 20\% \text{ to } 23\%$

Similar subdivision, but 100% developed:

Typical Lot Sale Price (most lots equivalent)	unavailable
Improved Lot Sales (range)	\$85,000 to \$105,000
Broadest Indicated Range of Lot Values (20% x \$85,000 to 23% x \$105,000)	\$17,000 to \$24,150
Narrowest Indicated Range of Lot Values (23% x \$85,000 to 20% x \$105,000)	\$19,550 to \$21,000

If both lots and improvements vary considerably, the broadest range is most appropriate. If most lots vary little and are judged equivalent but the improvements vary somewhat, the narrowest range is appropriate. Most subdivisions exhibit a combination of the two ranges, showing a narrow typical range, but a wider actual range of land values.

4. MASS APPRAISING

In preceding sections, we have outlined the fundamental concepts, principles, and valuation techniques underlying the Appraisal Process. We will now approach the problem at hand ... the revaluation of certain specified real property within a total taxing jurisdiction, be it an entire county or any subdivision thereof ... and to structure a systematic mass appraisal program to effect the appraisal of said properties in such a way as to yield valid, accurate, and equitable property valuations at a reasonable cost dictated by budgetary limitations, and within a time span totally compatible with assessing administration needs.

The key elements of the program are validity, accuracy, equity, economy, and efficiency. To be effective, the program must:

- incorporate the application of proven and professionally acceptable techniques and procedures;
- provide for the compilation of complete and accurate data and the processing of that data into an indication of value approximating the prices actually being paid in the market place;
- provide the necessary standardization measures and quality controls essential to promoting and maintaining uniformity throughout the jurisdiction;
- provide the appropriate production controls necessary to execute each phase of the operation in accordance with a carefully planned budget and work schedule; and
- provide techniques especially designed to streamline each phase of the operation, eliminating superfluous functions, and reducing the complexities inherent in the Appraisal Process to more simplified but equally effective procedures.

In summary, the objective of an individual appraisal is to arrive at an opinion of value, the key elements being the validity of the approach and the accuracy of the estimate. The objective of a mass appraisal for tax purposes is essentially the same. However, in addition to being valid and accurate, the value of each property must be

equitable with other property, and what's more, these valid, accurate, and equitable valuations must be generated as economically and efficiently as possible.

4.1. OVERVIEW

The prime objective of mass appraisals for tax purposes is to equalize property values. Not only must the value of one residential property be equalized with another, but it must also be equalized with each agricultural, commercial, and industrial property within the political unit.

The common denominator or the basis for equalization is market value -- that price which an informed and intelligent person, fully aware of the existence of competing properties and not being compelled to act, is justified in paying for a particular property.

The job of the appraiser is to arrive at a reasonable estimate of that justified price. To accomplish this, the coordination of approaches to the valuation of the various classes of property must be made so that they are related one to another in such a way as to reflect the motives of the prospective purchasers of each type of property.

A prospective purchaser of a residential property is primarily interested in its capacity to render service to the family as a place to live. Its location, size, quality, design, age, condition, desirability and usefulness are the primary factors to be considered in making a selection. By relying heavily upon powers of observation and inherent intelligence, knowing what could be afforded and simply comparing what is available, one property will eventually stand out to be more appealing than another. So it is likewise the job of the appraisers to evaluate the relative degree of appeal of one property to another for tax purposes.

The prospective purchaser of agricultural property will be motivated somewhat differently. The primary interest will be in the productive capabilities of the land. It is reasonable to assume that the purchaser will be familiar, at least in a general way, with the productive capacity of the farm. It might be expected that the prudent investor will have compared one farm's capabilities

PART 2: APPRAISAL THEORY

against another. Accordingly, the appraiser for local tax equalization purposes must rely heavily upon production information that results from accepted management practices.

The prospective purchaser of commercial property is primarily interested in the potential net return and tax shelter the property will provide. That price which is justified to pay for the property is a measure of the prospects for a net return from the investment. Real estate, as an investment then, must not only compete with other real estate, but also with stocks, bonds, annuities, and other similar investment areas. The commercial appraiser must explore the rental market and compare the income-producing capabilities of one property to another.

The prospective purchaser of industrial property is primarily interested in the overall utility value of the property. Of course, in evaluating the overall utility, individual consideration must be given to the land and each improvement thereon. Industrial buildings are generally of special purpose design, and as such, cannot readily be divorced from the operation for which they were built. As long as the operation remains effective, the building will hold its values; if the operation becomes obsolete, the building likewise becomes obsolete. The upper limit of its value is its replacement cost new, and its present day value is some measure of its present day usefulness in relation to the purpose for which it was originally designed.

Any effective approach to valuations for tax purposes must be patterned in such a way as to reflect the "modus operandi" of buyers in the market place. As indicated above, the motives influencing prospective buyers tend to differ depending upon the type of property involved. It follows that the appraiser's approach to value must differ accordingly.

The residential appraiser must rely heavily upon the market data approach to value ... analyzing the selling prices of comparable properties and considering the very same factors of location, size, quality, design, age, condition, desirability, and usefulness which were considered by the buyer.

The farm appraiser must rely primarily upon an effective analysis of the farm's productive potential to make an accurate "farmstead" or "farm homesite" valuation.

Rural dwellings are similar to urban dwellings in that their primary purpose is to provide a family with a home; as such, the appraiser should value them in the same manner as the valuation of any other residence. The approach to farm buildings, however, must be somewhat different. Here, the primary objective is to arrive at that value which the building's presence adds to the productivity of the land ... their degree of utility or usefulness. In determining the productive capabilities of the land, it will be necessary to divide the land into various classes according to specific types and uses, such as tillable, pasture, timberland, and irrigated tillable land, to compute the acreage of each class, and to value each class individually. Due consideration must be given to soil types and their fertility, making every effort to utilize all soil and land maps available through agriculture extension services, and state universities. Similarly, equal consideration must be given to all other factors affecting the value of the property, such as its location relative to the market place, its relative accessibility, the topography of the land, the shape and size of the fields, the extent and condition of the fences, drainage, water supply, etc.

The commercial appraiser will find that since commercial property is not bought and sold as frequently as is residential property, the sales market cannot be easily established. Consequently, relying heavily on the income approach to value will require that the net economic rent which the property is capable of yielding must be determined. The amount of investment required to effect that net return at a rate commensurate with that normally expected by investors must also be determined. This can only be achieved through a comprehensive study of the income-producing capabilities of comparable properties and an analysis of present-day investment practices.

The industrial appraiser will seldom be able to rely on the market data approach because of the absence of comparable sales. Also, it is not possible to rely upon the income approach ... again because of the absence of comparable investments, and because of the inability to accurately determine the contribution of each unit of production to the overall income produced. Therefore, by relying heavily on the cost approach to value, a determination must be made of the upper limit or replacement cost new of each improvement and the subsequent loss of value resulting overall from physical, functional, and economic factors.

The fact that there are different approaches to value, some of which are more applicable to one type of property than to another, does not, by any means, preclude equalization between types. Remember that the objective in each approach is to arrive at a price which an informed and intelligent person, fully aware of the existence of competing properties and not being compelled to act, is justified in paying for any one particular property. Underlying, and fundamental to each of the approaches is the comparison process. Regardless of whether the principal criteria are actual selling prices, income-producing capabilities, or functional usefulness, like properties must be treated alike. The primary objective is equalization. The various approaches to value, although valid in themselves, must nevertheless be coordinated one to the other in such a way as to produce values which are not only valid and accurate, but are also equitable. The same "yardstick" of value must be applied to all properties, and must be applied by systematic and uniform procedures.

It is obvious that sales on all properties are not required to effectively apply the market data approach. The same is true regarding any other approach. What is needed is a comprehensive record of all the significant physical and economic characteristics of each property in order to compare the properties of "unknown" values with the properties of "known" values. All significant differences between properties must in some measure, either positively or negatively, be reflected in the final estimate of value.

Each property must be given individual treatment, but the treatment must be uniform and standardized, and essentially no different than that given to any other property. All the factors affecting value must be analyzed and evaluated for each and every property within the entire political unit. It is only by doing this that equalization between properties and between types of properties can be ultimately effected.

All this, at best, is an oversimplification of the equalization process underlying the entire Mass Appraisal Program. The program itself consists of various operational phases, and its success depends primarily upon the systematic coordination of collecting and recording data, analyzing the data, and processing the data to an indication of value.

4.2. DATA INVENTORY

Basic to the appraisal process is the collection and recording of pertinent data. The data will consist of general supporting data, referring to the data required to develop the elements essential to the valuation process; neighborhood data, referring to information regarding pre-delineated neighborhood units; and specific property data, referring to the data compiled for each parcel of property to be processed into an indication of value by the cost, market and/or income approach.

The data must be comprehensive enough to allow for the adequate consideration of all factors which significantly affect property values. In keeping with the economics of a mass appraisal program, it is costly and impractical to collect, maintain, and process data of no or marginal contribution to the desired objectives. The axiom "too much data is better than insufficient data" does not apply. What does apply is the proper amount of data, no more or no less, which is necessary to provide the data base required to generate the desired output.

General Supporting Data. The appraisal staff will be primarily concerned with cost, sales and income data, but they will also find it necessary to research and compile general socio-economic information pertaining to the entire political unit under appraisal. The information will serve to assist the staff during the analytical phase of the operation and should include, but not necessarily be limited to, population trends, prevailing geographical factors, primary transportation facilities, primary income sources, unemployment and income levels, institutional influences, the annual volume of new construction and ownership transfers, availability of vacant land, construction labor and material costs, preponderance of residential rentals, and the amount of residential vacancies.

- To apply the cost approach to value, cost data must be sufficient to develop or select and validate the pricing schedules and cost tables required to compute the replacement cost new of improvements.
- All data pertaining to the cost of total buildings in place should include the parcel identification number, property address, date of completion, construction cost, name of builder, source of

PART 2: APPRAISAL THEORY

information, structural characteristics, and other information pertinent to analysis.

- Cost information may be recorded on the same form used to record specific property data.
- The principal sources for obtaining cost data are builders and developers, and it is generally advisable to collect cost data in conjunction with new construction pick-ups.
- Sales data must be sufficient enough to provide a representative sampling of comparable sales needed to apply the market data approach, to derive unit land values and depreciation indicators needed to apply the cost approach, and to derive gross rent multipliers and elements of the capitalization rate needed to apply the income approach.
- All sales data should include the parcel identification number, property classification code, month and year of sale, selling price, source of information, i.e., buyer, seller, agent, or fee, and a reliable judgment as to whether or not the sale is representative of a true arm's length transaction.
- Sales data should be recorded on the same form (assigned property record card) used to record specific property data, and verified during the property listing phase.
- The principal source for obtaining sales data is the Realty Transfer Certificate. Other sources may include multiple listing services, developers, realtors, lending institutions, and individual owners during the listing phase of the operation.
- Income and expense data must be sufficient enough to derive capitalization rates and accurate estimates of net income needed to apply the income approach.
- Income and expense data should include both general data regarding existing financial attitudes and practices, and specific data regarding the actual incomes and expenses realized by specific properties.
- The general data should include such information as equity return expectations, gross rentals, vacancy and operating cost expectations

and trends, prevailing property management costs, and prevailing mortgage costs.

- Specific data should include the parcel identification number, property address (or building ID), source of information, the amount of equity, the mortgage and lease terms, and an itemized account of the annual gross income, vacancy loss, and operating expenses for the most recent two-year period.
- The general data should be documented in conjunction with the development of capitalization procedural guidelines. The specific data, since it is often considered confidential and not subject to public access, should be recorded on special forms, designed in such a way as to accommodate the property owner or agent thereof in submitting the required information. The forms should also have space reserved for the appraiser's analysis and calculations.
- The principal sources for obtaining the general financial data are investors, lending institutions, and property managers. The primary sources for obtaining specific data are the individual property owners and/or tenants during the listing phase of the operation.

Neighborhood data. At the earliest feasible time during the data inventory phase of the operation, and after a thorough consideration of the living environment and economic characteristics of the overall county, or any political subdivision thereof, the appraisal staff should delineate the larger jurisdictions into smaller "neighborhood units," each exhibiting a high degree of homogeneity in residential amenities, land use, economic trends, and housing characteristics such as structural quality, age, and condition. The neighborhood delineations should be outlined on an index (or comparable) map and each assigned an arbitrary Neighborhood Identification Code, which when combined with the parcel identification numbering system, will serve to uniquely identify it from other neighborhoods.

Neighborhood data must be comprehensive enough to permit the adequate consideration of value-influencing factors to determine the variations in selling prices and income yields attributable to benefits arising from the location of one specific property as compared to another. The data should include the taxing district, the school

district, the neighborhood identification code, special reasons for delineation (other than obvious physical and economic boundaries), and various neighborhood characteristics such as the type (urban, suburban, etc.), the predominant class (residential, commercial, etc.), the trend (whether it is declining, improving, or relatively stable), its accessibility to the central business district, shopping centers, interstate highways and primary transportation terminals, its housing characteristics, the estimated range of selling prices for residentially-improved properties, and a rating of its relative durability.

All neighborhood data should be recorded on a specially designed form during the delineation phase.

Specific property data must be comprehensive enough to provide the data base needed to process each parcel of property to an indication of value, to generate the tax roll and related tax roll requirements, to generate other specified output, and to provide the assessing officials with a permanent record to facilitate maintenance functions and to administer taxpayer assistance and grievance proceedings.

The data should include the parcel identification number, ownership and mailing address, legal description, property address, property classification code, local zoning code, neighborhood identification code, site characteristics, and structural characteristics.

All the data should be recorded on a single, specially designed data collection card customized to meet individual assessing needs. Each card should be designed and formatted in such a way as to accommodate the listing of information and to facilitate data processing. In addition to the property data items noted above, space must be provided for a building sketch, land and building computations, summarizations, and memoranda. In keeping with the economy and efficiency of a mass appraisal program, the card should be formatted to minimize writing by including a sufficient amount of site and structural descriptive data which can be checked and/or circled. The descriptive data should be comprehensive enough to be suitable for listing any type of land and improvement data regardless of class, with the possible exception of large industrial, institutional, and utility complexes which require lengthy descriptions. In these cases, it will generally be necessary to use a specially

designed supplemental property record document, keyed and indexed to the corresponding data collection card. The data collection card should be made a permanent part of the assessing system, and used not only in conjunction with the revaluation, but also to update the property records for subsequent assessments.

The specific property data should be compiled from existing office records and field inspections. The parcel identification number, ownership, mailing address, and legal description may be obtained from existing tax rolls. Property classification codes may also be obtained from existing tax rolls (whenever available) and verified in the field. Local zoning codes may be obtained from existing zoning maps. Neighborhood identification codes may be obtained from the neighborhood delineation maps. Lot sizes and acreage may be obtained from existing tax maps. The property address, and the site and structural characteristics may be obtained by making a physical inspection of each property.

In transferring lot sizes from the tax maps to the property record cards, the personnel performing the tasks must be specially trained in the use of standardized lot sizing techniques and depth tables, which are necessary to adjust irregular shaped lots and abnormal depths to account for variations from predetermined norms. In regard to acreage, the total acreage may be transferred, but the acreage breakdowns required to effect the valuation of agricultural, commercial, and industrial properties must be obtained in the field from the property owner and verified by personal observation and aerial photographs, if available.

Field inspections must be conducted by qualified appraisers. During this phase of the operation, the appraiser should visit each property and make personal contact with the occupant. In the course of the inspection, the following procedures must be adhered to:

- identification of the property.
- verification of the ownership.
- recording the property address.
- verification of the property classification and zoning codes.

PART 2: APPRAISAL THEORY

- interviewing the occupant of the building and recording all pertinent economic data.
- inspection of the interior of the building and recording of all pertinent physical data.
- measuring and inspecting the exterior of the building, as well as all other improvements on the property, and recording the story height, and the dimensions and/or size of each.
- recording a sketch of the principal building(s), consisting of a plan view showing the main portion of the structure along with any significant attached exterior features, such as porches, etc. All components must be identified and the exterior dimensions shown for each.
- selection of and recording the proper quality grade, physical condition, and effective age of the improvement.
- selection of and recording the proper replacement costs or replacement cost adjustments for all field priced items.
- reviewing the data collection card for completeness and accuracy.

After the field inspection is completed, the data collection cards must be reviewed for completeness and accuracy.

Complete and accurate data is essential to the program. Definite standardized data collection and recording procedures must be followed if these objectives are to be met.

4.3. PROCESSING THE DATA

This phase of the operation involves the analysis of data compiled during the data inventory phase and the processing of that data to an indication of value through the use of the cost, market, and income approaches to value.

During the analytical phase, it will be necessary to analyze cost, market, and income data in order to provide a basis for validating the appropriate cost schedule and tables required to compute the replacement cost new of all buildings and structures; for establishing comparative unit land values for each type of property; for establishing the appropriate depreciation tables and guidelines

for each type of property; and for developing gross rent multipliers, economic rent and operating expense norms, capitalization rate tables and other related standards and norms required to effect the mass appraisal of all the property within an entire political unit on an equitable basis.

After establishing the appropriate standards and norms, the specific data compiled for each property must be analyzed. This is done by giving due consideration to the factors influencing the value of that particular property as compared to another, and then to process the data into an indication of value by employing the techniques described in the section of the manual dealing with the application of the traditional approaches to value.

Any one, or all three of the approaches, if applied properly, should lead to an indication of market value; of primary concern is applying the approaches on an equitable basis. This may require the coordinated effort of a number of individual appraisers, each appraiser acting as a member of a team, with the team effort directed toward a valid, accurate and equitable appraisal of each property within the political unit. Each property must be reviewed, during which time the following procedures must be adhered to:

- verification of the accuracy of each of the characteristics recorded on the data collection card.
- certification that the proper schedules and cost tables were used in computing the replacement cost of each building and structure.
- determination of the proper quality grade and design factor to be applied to each building to account for variations from the base specifications.
- making a judgment of the overall condition, desirability, and usefulness of each improvement in order to arrive at a sound allowance for depreciation.
- capitalization of net income capabilities into an indication of value in order to determine the loss of value attributable to functional and economic obsolescence.
- addition of the depreciated value of all improvements to the land value, and reviewing

the total property value in relation to the value of comparable properties.

- determination that the total property value established can be correlated to actual sales of comparable properties.

Once the final values have been established for each property, the entire program should be evaluated in terms of its primary objectives: Do the values approximate a satisfactory level of market value, and more importantly, are the values equitable? Satisfactory answers to these questions can best be obtained through a statistical analysis of recent sales in an appraisal-to-sale ratio study, if sufficient sales are available.

To perform the study, it is necessary to take a representative sampling of recent valid sales and compute the appraisal-to-sale ratio for each of the sales. If the sample is representative, the computed median appraisal-to-sale ratio will give an indication of how close the appraisals within each district approximate the market value. This is providing, of course, that the sales included represent true market transactions. It is then necessary to determine the deviation of each

individual appraisal-to-sale ratio from the median ratio, and to compute either the average or the standard deviation, which will give an indication of the degree of equity within each individual district. What remains then is to compare the statistical measures across property types in order to determine those areas, if any, which need to be further investigated, revising the appraisal, if necessary, to attain a satisfactory level of value and equity throughout the entire jurisdiction.

The techniques and procedures set forth herein, if applied skillfully, should yield highly accurate and equitable property valuations, and should provide a sound property tax base. It should be noted, however, that no program, regardless of how skillfully administered, can ever be expected to be error-free. The appraisal must be fine tuned and this can best be done by giving the taxpayer an opportunity to question the value placed upon his property and to produce evidence that the value is inaccurate or inequitable. During this time, the significant errors will be brought to light, and taking the proper corrective action will serve to further the objectives of the program. What's important in the final analysis is to use all these measures as well as any other resources available to obtain the highest degree of accuracy and equity possible.



31. PROPERTY ADMINISTRATION DATA

TABLE OF CONTENTS

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
901	MUNICIPALITY CODE	1	925	ADDITION / SUBDIVISION	4
902	ASSESSMENT LIST CODE	2	927	SECTION, TOWNSHIP, RANGE	4
903	LEVY DISTRICT CODE	2	929	SHORT LEGAL DESCRIPTION	4
904	ASSESSOR'S CODE	2	934	DEED BOOK AND PAGE	4
906	PROPERTY ASSESSMENT CHANGE CODE	2	936	PREVIOUS ID NUMBER	5
911	OWNER NAME 1	2	939	NEW CLASS CODE & ALLOCATED BASE VALUE	5
912	OWNER NAME 2	2	956	SUBSIDIARY DEED BOOK AND PAGE	5
913	DBA	3	961	SUBSIDIARY OWNER NAME	5
914	MAILING ADDRESS	3	965	SUBSIDIARY NOTES	5
915	CITY, STATE, ZIP CODE	3	982-984	EXEMPTION APPLICATION DATA	5
916	FOREIGN COUNTRY	3	985	APPEAL APPRAISER ID	6
918	IN-CARE-OF TAXPAYER NAME 1	3	986-989	AB-26 FILING INFORMATION	6
919	IN-CARE-OF TAXPAYER NAME 2	3	990-993	COUNTY APPEAL INFORMATION	7
920	IN-CARE-OF MAILING ADDRESS	3	994-997	STATE TAX APPEAL BOARD INFORMATION	8
921	IN-CARE-OF CITY, STATE, ZIP CODE	3			
922	IN-CARE-OF FOREIGN COUNTRY	4	998	COURT APPEAL INFORMATION	8

CONTENT OF DATA FIELDS

All of the Property Administration data is contained on four screens. The following list shows the fields in numerical order and describes the data requirements for them. It also shows the number of the screen that contains the field.

901 MUNICIPALITY CODE PA S1

Required

A three-character code identifying the city or town in which the subject property is located.

The rules governing the determination of a municipality are:

1. An incorporated city or town must be a municipality.
2. An unincorporated village or settlement *may* be a municipality if it has one of the following.
 - a. Post Office
 - b. Special taxing district for public services; for example, a Special Improvements District (SID).

Rules governing the coding of a municipality

1. A parcel (Quarter Section Lot) *cannot* have two municipality codes. For example, one

parcel cannot be both inside and outside of an incorporated town.

- a. The city/town limits of an incorporated city/town will divide a parcel (a Quarter Section Lot). That is, an ownership that is both in and outside of an incorporated city or town must be divided into two parcels; one inside the city and the other outside.
- b. An unincorporated village or settlement has no "city limits", therefore the parcel boundaries will be the "city limits".

2. If a parcel is not in a municipality, enter "XXX".

Codes for each municipality will be found on the County Municipality List. Corrections to the list *must be* made and mailed to the Helena office.

The MUNICIPALITY CODE is edited against the Municipality File for validity.

PART 3: DATA COLLECTION

902 ASSESSMENT LIST CODE PA S1

Required

Enter the code that describes the type of Assessment List that is to be produced.

MH MOBILE HOME, personal property mobile home
NP NET PROCEEDS and ROYALTIES
PP PERSONAL PROPERTY
PR PERSONAL and REAL PROPERTY
RE REAL ESTATE only

903 LEVY DISTRICT CODE PA S1

Required

Enter the four-character code used to identify the taxing district in which the property is located. The county Levy District number will be found in the assessment book entry for the parcel, and the corresponding state code can be looked up in the Municipality or Subdivision listing for the county.

The LEVY DISTRICT CODE is edited against the Municipality File for validity. There are two additional sub-fields provided if the parcel is located in any sub-levy district(s).

Always enter all four digits, adding leading zeros if necessary.

904 ASSESSOR'S CODE PA S1

Required

Enter the ten-character identifier, unique within a county, used by the local County Assessor to identify property within that county. The ASSESSOR'S CODE is used to aggregate a group of PA record values for output to one Assessment List (Notice of Values). The ASSESSOR'S CODE is assigned by the County Assessor.

Care must be used to consistently right justify the ASSESSOR'S CODE number within this field so that computer sorting routines will produce a consistent index comparable to the county roll.

SEQUENCE NUMBER - If applicable for the County, enter the two-digit SEQUENCE NUMBER for the geocode parcel. If no SEQUENCE NUMBER has been assigned, leave this field blank.

906 PROPERTY ASSESSMENT CHANGE CODE PA S1

Required

Enter the PROPERTY ASSESSMENT CHANGE CODE that best describes the reason that a change is being made to this record. Enter the Change Code being coded in the left-most available position. Six different changes per year may be entered.

- 1 OWNERSHIP CHANGE
- 2 PARCEL SPLIT
- 3 LAND USE CHANGES
- 4 ADDITION or SUBTRACTION of PERSONAL PROPERTY affixed to land
- 5 CHANGE IN TAXABLE PERCENTAGE
- 6 ADDRESS CHANGE
- 7 ERROR CORRECTION - no change in assessment
- 9 CONVERTED - no activity on this record since initial data conversion

911 OWNER NAME 1 PA S1

Required

Enter the name of the parcel's owner (the Taxpayer), left-justified. If the name consists of more than one word, leave one blank space between words. Abbreviate with care when necessary. The format to enter the information is:

Last Name (space) First Name (space) Middle Initial

This is the name of the person to whom correspondence from the system will normally be sent. The name in this field is also displayed in an alternate index that is used if the parcel geocode number is unknown.

For parcels having multiple owners with different last names, enter the first owner's name in this field and the second owner's name in the OWNER NAME 2 field.

If the ownership of the parcel is unknown, enter "Unknown".

912 OWNER NAME 2 PA S1

Optional

Enter the second owner's name or use this field as an additional mailing address line. If needed, four more lines are available on each subsidiary record, field 961, to enter additional owners' names.

31. PROPERTY ADMINISTRATION DATA

913 DBA PA S1
Optional
Enter the "Doing Business As" name of the owner of the parcel. If none, leave this field blank.

914 MAILING ADDRESS PA S1
Optional
Enter the house or building number, street name, and apartment or unit number, if applicable, of the owner's mailing address. This is a free-format field, enter left-justified.

When a company or individual wishes to receive their mail through a post office box and also show their street address; the dual address is the answer. When two addresses are used, street address and post office box number, the box number should always be immediately above the last line in the address. For example:

OWNER NAME 1	ABC Company
OWNER NAME 2	907 Power Block Bldg
MAILING ADDRESS	P.O. Box 1234
CITY/STATE/ZIP	Helena MT 59601

915 CITY, STATE, ZIP CODE PA S1
Required, if mailing address is within the United States.

CITY - enter the name of the city or town of the Taxpayer's mailing address.

STATE - enter the two-character abbreviation of the state of the Taxpayer's mailing address. Valid entries are listed in the Appendix.

ZIP CODE - enter the Zip Code of the owner's mailing address. If the owner's mailing address is outside of the United States, enter "00000". This will aid the computer sorting routines used for sorting mail by Zip Code.

ZIP+4 CODE - enter the Zip+4 code of the Taxpayer's mailing address. If unknown, leave this blank.

916 FOREIGN COUNTRY PA S1
Required if mailing address is outside the United States.

Enter the foreign City, State, Province, etc., portion of Taxpayer's mailing address. The Foreign Country field is free-format.

918 IN-CARE-OF TAXPAYER NAME 1 PA S1
Optional
Enter the Care-of Taxpayer's Name. The Care-of Taxpayer is the buyer's name in the case of a contract for deed (sale). This is the name of the person to whom correspondence from the system will normally be sent. The name in this field is displayed in an alternate index that is used if the parcel geocode number is unknown.

The format to enter the information is:

Last Name (space) First Name (space) Middle Initial

919 IN-CARE-OF TAXPAYER NAME 2 PA S1
Optional
A thirty-character field in which to enter the second line of Care-Of Taxpayer Name or to be used as an additional mailing address line.

920 IN-CARE-OF MAILING ADDRESS PA S1
Optional
Enter the house or building number, street name, and apartment or unit number, if applicable, of the Care-Of Taxpayer's mailing address. This is a free-format field.

921 IN-CARE-OF CITY, STATE, ZIP CODE PA S1
Optional
CITY - enter the name of the city or town of the Care-Of Taxpayer's mailing address.

STATE - enter the two-character abbreviation of the state of the Care-Of Taxpayer's mailing address. Valid entries are listed in the Appendix.

ZIP CODE - enter the Zip Code of the Care-Of Taxpayer's mailing address. If the Care-Of Taxpayer's mailing address is outside of the United States, enter "00000". This will aid the computer sorting routines used for sorting mail by Zip Code.

ZIP+4 CODE - enter the Zip+4 code of the Care-Of Taxpayer's mailing address. If unknown, leave this blank.

PART 3: DATA COLLECTION

922 IN-CARE-OF FOREIGN COUNTRY PA S1

Optional

Enter the foreign City, State, Province, etc., portion of the Care-Of Taxpayer's mailing address. The Foreign Country field is free-format.

925 ADDITION / SUBDIVISION PA S1

Required for all platted parcels.

The Addition/Subdivision, Block, and Lot is displayed in an alternate index that is used if the parcel geocode number is unknown.

The Addition or Subdivision name will be found in the assessment book or on the property record card, and the corresponding abbreviation can be looked up in the subdivision list for the county.

ADDITION/SUBDIVISION CODE - enter the three-character code that identifies the Addition or Subdivision in which the parcel is located. The code is edited against the Addition/Subdivision file. Enter "XXX" for unplatted parcels.

BLOCK - enter the Platted/Legally Described Addition or Subdivision Block number on which the parcel is located. Always enter all three characters. For unplatted parcels, or Additions in which all lots have been grouped together without division into blocks, enter "000".

LOT - enter the Platted/Legally Described Lot Identifier of the lot within the Addition on which the parcel is located. When the parcel occupies more than one lot and/or portions of lots, enter the lowest numbered Lot in this field and describe all Lot numbers in the **SHORT LEGAL DESCRIPTION** field. Be sure to enter all three characters, adding leading zeros if necessary.

For unplatted parcels, or parcels in an Addition where numbered blocks have not been split into numbered lots, enter "000". In the latter case, portions of those blocks may be sold by metes and bounds description.

NOTE: Letters may be included in the Block or Lot number. In this case, enter the letters as part of the number. Example: Amended Lot 2A, Enter "02A".

927 SECTION, TOWNSHIP, RANGE PA S1

Required for all unplatted parcels.

Section, Township and Range is displayed in an alternate index if the parcel geocode number is unknown.

SECTION NUMBER - enter the two-digit code representing the Section of the Township in which the subject property is located, as identified in the legal description of the recorded deed to the subject property. Valid entries are 01 through 36.

TOWNSHIP NUMBER - Township is made up of three parts - number (two digits), half number (0 if no half, 5 if half), and suffix (direction, N or S). Enter the township as identified in the legal description of the recorded deed of the subject property.

RANGE NUMBER - Range is made up of three parts - number (two digits), half number (0 if no half, 5 if half), and suffix (direction, E or W). Enter the range as identified in the legal description of the recorded deed of the subject property.

929 SHORT LEGAL DESCRIPTION PA S1

Optional

Enter the legal description of the parcel as found in the deed describing the parcel, especially if no Addition/Subdivision (925) or Section, Township, Range (927) is entered. If the parcel's legal description is lengthy, additional entries may be made in the subsidiary **ADDITIONAL PROPERTY DESCRIPTION** fields (965).

If the parcel is a single lot and that lot has been described in the **ADDITION/SUBDIVISION** fields, these legal description fields may be left blank.

934 DEED BOOK AND PAGE PA S1

Optional

Two deed references and the date of recording may be entered. If needed, eight more deed entries may be entered on each subsidiary record (956).

BOOK - enter the book in which the deed for this parcel is contained.

PAGE - enter the page of the book for the deed of this parcel.

DATE - enter the date the deed was filed; formatted as two-digit month, two-digit day, and two-digit year.

936 PREVIOUS ID NUMBER PA S1
Optional

Two fifteen-character fields in which to enter identifiers formerly used to describe the subject property. Possible entries may be previous Assessor's codes or previous geocodes (as in the case of splits or combinations).

939 NEW CLASS CODE & ALLOCATED BASE VALUE PA S2
Optional

Enter the NEW CLASS CODE(s) and the corresponding BASE VALUE(s), if the Class Code(s) or CAMA Base Value(s) of the parcel as passed from the CAMA file must be adjusted. NEW CLASS CODES & VALUES may need to be adjusted because of the granting of exemptions and/or value reductions.

Up to sixteen NEW CLASS CODE(s) and ALLOCATED BASE VALUE(s) may be entered for a PA record.

If the user adjusts one value or class, all other classes and values must be manually entered. The override is for the entire PA record.

The complete listing of PROPERTY CLASS CODES can be found in the Appendix of this Section of the Data Collection Manual.

956 SUBSIDIARY DEED BOOK AND PAGE PA SUB
Optional

Additional Deed Book and Page references for this parcel may be entered in these fields.

961 SUBSIDIARY OWNER NAME PA SUB
Optional

Additional Owner Names may be entered in these fields.

965 SUBSIDIARY NOTES PA SUB
Optional

Fourteen fields, of thirty characters each, are provided in which to enter free-formatted notes relevant to any part of this parcel.

982-984 EXEMPTION APPLICATION DATA
Optional PA SUB

Additional exemption information may be entered on subsequent subsidiary records. This may be required as in the case of a property owner who reapplies for an exemption after being denied.

APPLICATION DATE - enter the date of the exemption application; formatted as a two-digit month, two-digit day, and two-digit year.

TYPE - enter the code that best describes the type of exemption (such as charitable, federal, religious) claimed by the applicant.

- 01 Religious
- 02 Charitable
- 03 United States Government owned
- 04 State of Montana owned
- 05 County owned
- 06 City owned
- 07 School District owned
- 08 Irrigation District owned
- 09 Public Library
- 10 Education
- 11 Horticultural/Agricultural Society
- 12 Non-Profit Health Care Facility
- 13 Cemetery
- 14 Art Gallery
- 15 Public Observatory
- 16 Non-Profit Water Association
- 17 Developmentally Disabled Organization
- 18 Non-Profit International Athletic Facility
- 19 Non-Fossil Energy Generation
- 20 Veteran's Clubhouse
- 21 Community Service Building
- 22 Disabled Veteran's Residence
- 23 Non-producing Manufacturing and Railroad Operating Property

NUMBER - enter the seven-character assigned number of the application.

REVIEW DATE - enter the date the property was reviewed for eligibility for exemption; formatted as a two-digit month, two-digit day, and two-digit year.

DECISION DATE - enter the date the exemption was granted or denied; formatted as a two-digit month, two-digit day, and two-digit year.

PART 3: DATA COLLECTION

DECISION CODE - enter the code that describes the decision on this exemption application.

- 1 GRANTED
- 2 DENIED
- 3 PARTIALLY GRANTED
- 4 PENDING

EXEMPTION AMOUNT - Enter the amount of value that has been determined to be exempt from assessment. This amount should also be allocated in the parcel's value override section, on screen MAS RES S9 and MAS COM S10.

NOTE: The appraiser should ensure that the total appraised value is allocated between exempt class codes (2150 and 3150), and standard class codes. The allocation must add up to the total appraised value.

DECISION APPEALED - enter "Y" if the exemption decision is appealed. Leave the field blank if not appealed.

EXPIRATION DATE - enter the date the exemption is to expire. The exemption must be reviewed on this date. This field is formatted as a two-digit month, two-digit day, and two-digit year.

EXEMPTION REASON CODE - enter the code that best describes the reason the request for exemption was granted or denied.

GRANTED:

- 01 Property met requirements of exemption statute
(codes 02-04 are reserved for future use)

DENIED:

- 05 Not used for religious worship
- 06 Not occupied by member of clergy
- 07 Not in qualifying use on January 1
- 08 Not owner of record on January 1
- 09 Required information not submitted by applicant
- 10 Missed March 1 application deadline
- 11 Profit making corporation
- 12 Not charitable in nature
- 13 Not exclusive use
- 14 No license from the Health Department
- 15 Not incorporated as non-profit organization
- 16 Cemetery: No permanent care and improvement fund established

- 17 Charges admission
- 18 Not open at reasonable hours
- 19 Furnishes non-potable water
- 20 No international sports use
- 21 Not non-fossil fuel
- 22 Portion of parcel used for a bar
- 23 Portion of parcel used for business
- 24 Excessive land
- 25 Not a national fraternal organization
- 26 Has a Montana food or beverage license
- 27 Does not provide required services to senior citizens
- 28 Excessive charge for use
- 29 Not occupied by veteran or spouse of veteran
- 30 Not killed on active duty
- 31 Death not service connected
- 32 Not 100% disabled
- 33 Exceeds income requirements
- 34 Not the primary residence
- 35 Spouse moved from original house
- 36 Spouse remarried
- 37 Began production less than 6 months ago
- 38 No manufacturing or railroad use

EXEMPTION REASON EXPLANATION - enter any additional detail regarding the granting or denial of this exemption application that is not sufficiently covered by a reason listed above.

985 APPEAL APPRAISER ID PA APPL
Required

Enter the permanent identification number of the person responsible for the review of the appeal information of this parcel.

986-989 AB-26 FILING INFORMATION
Optional PA APPL

DATE FILED - enter the date the AB-26 was filed by the Taxpayer; formatted as a two-digit month, two-digit day, and two-digit year.

REASON OF TAXPAYER REQUEST - enter the code that best describes the reason that the Taxpayer has requested that this property be reviewed.

- 01 Improvement value too high
- 02 Land value too high
- 03 Personal property value too high
- 04 Recent purchase price for property
- 05 Not enough depreciation for condition of property

31. PROPERTY ADMINISTRATION DATA

- 06 Property should be in Class 18 or 19
- 07 Property is in agricultural use or is in a green belt status
- 08 Agricultural/Timber Land Classification
- 09 Total property value too high
- 10 Grade of house too high
- 11 Income Approach not considered
- 12 Present Worth of Future Benefits Approach

AB-26 APPLICATION NUMBER - enter the seven-character application number of this application.

YEAR - enter the tax (lien) year of the property appraisal being reviewed.

VALUE OF PROPERTY - enter the value of the property being reviewed *before* the Taxpayer filed the AB-26.

HEARING DATE - enter the date that the Taxpayer's Request for Review was heard; formatted as a two-digit month, two-digit day, and two-digit year.

VALUE AFTER DECISION - enter the value of the property being reviewed *after* the hearing with the Taxpayer, and review of property has been made.

STATUS - enter the code that describes the decision taken on this Taxpayer's Request for Review (AB-26).

- 1 APPROVED
- 2 DISAPPROVED
- 3 ADJUSTED
- 4 PENDING
- 5 WITHDRAWN

DECISION DATE - enter the date the decision was rendered on this AB-26; formatted as a two-digit month, two-digit day, and two-digit year.

990-993 COUNTY APPEAL INFORMATION

Optional PA APPL

DATE APPEALED - enter the date the Appeal was filed by the Taxpayer; formatted as a two-digit month, two-digit day, and two-digit year.

REASON OF TAXPAYER APPEAL - enter the code that best describes the reason that the Taxpayer has appealed the value of this property:

- 01 Improvement value too high
- 02 Land value too high
- 03 Personal property value too high
- 04 Recent purchase price for property
- 05 Not enough depreciation for condition of property
- 06 Property should be in Class 18 or 19
- 07 Property is in agricultural use or is in a green belt status
- 08 Agricultural/Timber land classification
- 09 Total property value too high
- 10 Grade of house too high
- 11 Income approach not considered
- 12 Present worth of future benefits approach
- 13 Continuation of previous year's appeal
- 14 Denial of tax exemption

APPEAL NUMBER - enter the seven-character number assigned to this appeal.

YEAR - enter the tax (lien) year of the property appraisal being appealed.

VALUE OF PROPERTY - enter the value of the property being appealed *before* the Taxpayer filed the appeal.

HEARING DATE - enter the date that the Taxpayer's Appeal was heard; formatted as a two-digit month, two-digit day, and two-digit year.

VALUE AFTER DECISION - enter the value of the property being appealed *after* the Appeal hearing with the County Tax Appeal Board.

STATUS - enter the code that describes the decision taken on this Appeal.

- 1 APPROVED
- 2 DISAPPROVED
- 3 ADJUSTED
- 4 PENDING
- 5 WITHDRAWN

DECISION DATE - enter the date the decision was rendered on this Appeal; formatted as a two-digit month, two-digit day, and two-digit year.

PART 3: DATA COLLECTION

994-997 STATE TAX APPEAL BOARD INFORMATION PA APPL Optional

DATE APPEALED - enter the date an appeal was filed with the State Tax Appeal Board by either the Taxpayer or the Department. This field is formatted as a two-digit month, two-digit day, and two-digit year.

APPEAL REASON - enter the code that best describes the reason that the Taxpayer or the Department has appealed the decision on this property:

Reasons for Taxpayer Appeal

- 01 Improvement value too high
- 02 Land value too high
- 03 Personal property value too high
- 04 Recent purchase price for property
- 05 Not enough depreciation for condition of property
- 06 Property should be in Class 18 or 19
- 07 Property is in agricultural use or is in a green belt status
- 08 Agricultural/Timber land classification
- 09 Total property value too high
- 10 Grade of house too high
- 11 Income approach not considered
- 12 Present worth of future benefit's approach
- 13 Continuation of previous year's appeal
- 14 Denial of tax exemption

Reasons for Departmental Appeal

- 01 Violation of Base Year
- 02 Doesn't meet requirements of AG/Green Belt
- 03 Appeal not timely
- 04 Contrary to current statute
- 05 Decision jeopardizes equality in that area
- 06 Non-decision by County Tax Appeal Board
- 07 Continuation of previous year's appeal
- 08 Previous decision of CTAB or STAB not appealed and condition of property has not changed
- 09 Violation of Administrative Rule
- 10 Failure to exhaust Administrative remedies
- 11 County Tax Appeal Board granted tax exemption
- 12 County Tax Appeal Board excessively reduced property values

DOCKET NUMBER - enter the seven-character assigned number to this appeal.

YEAR - enter the tax (lien) year of the property appraisal being appealed.

VALUE OF PROPERTY - enter the value of the property being appealed *before* the Taxpayer filed the appeal.

HEARING DATE - enter the date that the Taxpayer's Appeal was heard; formatted as a two-digit month, two-digit day, and two-digit year.

VALUE AFTER DECISION - enter the value of the property being appealed *after* the Appeal hearing with the State Tax Appeal Board.

STATUS - enter the code that describes the decision taken on this Appeal.

- 1 APPROVED
- 2 DISAPPROVED
- 3 ADJUSTED
- 4 PENDING
- 5 WITHDRAWN

DECISION DATE - enter the date the decision was rendered on this Appeal; formatted as a two-digit month, two-digit day, and two-digit year.

998 COURT APPEAL INFORMATION

Optional PA APPL
DISTRICT COURT APPEAL - has the decision of the State Tax Appeal Board been appealed to District Court? Y = yes and N = no.

SUPREME COURT APPEAL - has the decision of the District Court been appealed to the Supreme Court ? Y = yes and N = no.

A31.1. STATE POSTAL ABBREVIATIONS

AL	Alabama	MT	Montana
AK	Alaska	NE	Nebraska
AZ	Arizona	NV	Nevada
AR	Arkansas	NH	New Hampshire
CA	California	NJ	New Jersey
CZ	Canal Zone	NM	New Mexico
CO	Colorado	NY	New York
CT	Connecticut	NC	North Carolina
DE	Delaware	ND	North Dakota
DC	District of Columbia	CM	Northern Mariana Islands
FL	Florida	OH	Ohio
GA	Georgia	OK	Oklahoma
GU	Guam	OR	Oregon
HI	Hawaii	PA	Pennsylvania
ID	Idaho	PR	Puerto Rico
IL	Illinois	RI	Rhode Island
IN	Indiana	SC	South Carolina
IA	Iowa	SD	South Dakota
KS	Kansas	TN	Tennessee
KY	Kentucky	TX	Texas
LA	Louisiana	TT	Trust Territory
ME	Maine	UT	Utah
MD	Maryland	VT	Vermont
MA	Massachusetts	VA	Virginia
MI	Michigan	VI	Virgin Island
MN	Minnesota	WA	Washington
MS	Mississippi	WV	West Virginia
MO	Missouri	WI	Wisconsin
		WY	Wyoming

PART 3: DATA COLLECTION

A31.2. PROPERTY CLASSIFICATION CODES

CODE	DESCRIPTION	CLASS	PERCENTAGE
1101	Tillable Irrigated Land	3	30.0
1401	Tillable Non-Irrigated Land - Fallow	3	30.0
1501	Tillable Non-Irrigated Land - Continuously Cropped	3	30.0
1601	Grazing Land	3	30.0
1801	Wild Hay Land	3	30.0
1901	Timberland	13	3.84
2001	1 Acre Farmstead	14	3.088
2101	Tract Land	4	3.86
2107	Commercial Tract Land	4	3.86
2109	Locally Assessed Co-op Land	5	3.0
2118	Eligible Mining Claim	18	30.0
2119	Nonproductive Land Under 20 Acres	19	2.0
2120	Land devoted to processing ag/timber products and out of production for 12 months or acquired via foreclosure or bankruptcy (see 15-6-150) 25% reduction first year.	20	3.86
2121	Land devoted to processing ag/timber products and out of production for 12 months or acquired via foreclosure or bankruptcy (see 15-6-150) 50% reduction second year.	20	3.86
2122	Land devoted to processing ag/timber products and out of production for 12 months or acquired via foreclosure or bankruptcy (see 15-6-150) 75% reduction third year.	20	3.86
2123	Land devoted to processing ag/timber products and out of production for 12 months or acquired via foreclosure or bankruptcy (see 15-6-150) salvage value.	20	3.86
2140	100% Disabled Veterans' Land	4	0.0
2150	Exempt Res./Sub. Land	4	0.0
2151	Exempt Agricultural Land	3	0.0
2152	Exempt Timberland	13	0.0
2201	Residential City/Town Lots	4	3.86
2207	Commercial City/Town Lots	4	3.86
2209	Locally Assessed Co-op City/Town Lots	5	3.0
2311	Golf Course Land	4	1.93
2611	Industrial Land	4	3.86
2615	Locally Assessed Co-op On Industrial Land	5	3.0
2651	New Industry Land	5	3.0
2652	Research and Development Land	5	3.0

A31.2. PROPERTY CLASSIFICATION CODES (Cont'd.)

CODE	DESCRIPTION	CLASS	PERCENTAGE
LOW INCOME PERSON'S LAND SUBURBAN TRACTS OR CITY / TOWN LOTS			
2130	Income - 0%	4	0.0
2131	Income - 10%	4	0.386
2132	Income - 20%	4	0.772
2133	Income - 30%	4	1.158
2134	Income - 40%	4	1.544
2135	Income - 50%	4	1.93
2136	Income - 60%	4	2.316
2137	Income - 70%	4	2.702
2138	Income - 80%	4	3.088
2139	Income - 90%	4	3.474
LOW INCOME PERSON'S LAND - 1 ACRE FARMSTEAD			
2210	Income - 0%	14	0.0
2211	Income - 10%	14	0.309
2212	Income - 20%	14	0.618
2213	Income - 30%	14	0.926
2214	Income - 40%	14	1.235
2215	Income - 50%	14	1.544
2216	Income - 60%	14	1.853
2217	Income - 70%	14	2.162
2218	Income - 80%	14	2.47
2219	Income - 90%	14	2.779
3110	Improvements on Ag/Timberland	14	3.088
3111	Improvements on Disparately Owned Agricultural/Timberland	14	3.088
3112	Improvements on Disparately Owned Agricultural/Timberland - can't demonstrate \$1,500 worth of annual income	4	3.86
3113	Improvements devoted to processing ag/timber products and out of production for 12 months or acquired via foreclosure or bankruptcy (see 15-6-150) 25% market value reduction first year.	20	3.86
3114	Improvements devoted to processing ag/timber products and out of production for 12 months or acquired via foreclosure or bankruptcy (see 15-6-150) 50% market value reduction second year.	20	3.86
3115	Improvements devoted to processing ag/timber products and out of production for 12 months or acquired via foreclosure or bankruptcy (see 15-6-150) 75% market value reduction third year.	20	3.86
3116	Improvements devoted to processing ag/timber products and out of production for 12 months or acquired via foreclosure or bankruptcy (see 15-6-150) salvage value, fourth year and beyond.	20	3.86
3145	100% Disabled Veterans' Improvements	4	0.0
3150	Exempt Improvements	4	0.0

PART 3: DATA COLLECTION**A31.2. PROPERTY CLASSIFICATION CODES (Cont'd.)**

CODE	DESCRIPTION	CLASS	PERCENTAGE
3301	Improvements on Tract Land	4	3.86
3307	Improvements on Commercial Tract Land	4	3.86
3309	Improvements on Locally Assessed Co-op Tract Land	5	3.0
3501	Improvements on Residential City/Town Lots	4	3.86
3507	Improvements on Commercial City/Town Lots	4	3.86
3509	Improvements on Locally Assessed Co-op City/Town Lots	5	3.0
3607	Commercial Improvements on Right-of-Way	4	3.86
3608	Residential Improvements on Right-of-Way	4	3.86
3609	Locally Assessed Co-op Improvements on Right-of-Way	5	3.0
3610	Agricultural Imps on Right-of-Way	4	3.86
3631	Hydraulic Power Works Improvements	4	3.86
3671	Golf Course Improvements	4	1.93
3807	First Year New Industry Improvements	4	1.93
3808	Second Year New Industry Improvements	4	1.93
3809	Third Year New Industry Improvements	4	1.93
3810	Fourth Year New Industry Improvements	4	1.93
3811	Fifth Year New Industry Improvements	4	1.93
3812	Sixth Year New Industry Improvements	4	2.316
3813	Seventh Year New Industry Improvements	4	2.702
3814	Eighth Year New Industry Improvements	4	3.088
3815	Ninth Year New Industry Improvements	4	3.474
3817	Tenth Year New Industry Improvements & All Industrial Improvements	4	3.86
3818	Research and Development Firm Improvements	5	3.0
3819	Improvements on Locally Assessed Co-op Industrial Land	5	3.0
3851	Improvements on New Industry Land	5	3.0
3900	Remodeled Improvements - Year of Construction	4	0.0
3901	Remodeled Improvements 1st Year after Construction	4	0.772
3902	Remodeled Improvements 2nd Year after Construction	4	1.544
3903	Remodeled Improvements 3rd Year after Construction	4	2.316
3904	Remodeled Improvements 4th Year after Construction	4	3.088
3905	Remodeled Improvements 5th Year after Construction	4	3.86
3906	Remodeled Research and Development Improvements - Year of Construction	5	0.0
3907	Remodeled Research and Development Improvements - Following 1st Year of Construction	5	0.006
3908	Remodeled Research and Development Improvements - Following 2nd Year of Construction	5	0.012
3909	Remodeled Research and Development Improvements - Following 3rd Year of Construction	5	0.018
3910	Remodeled Research and Development Improvements - Following 4th Year of Construction	5	0.024

A31.2. PROPERTY CLASSIFICATION CODES (Cont'd.)

CODE	DESCRIPTION	CLASS	PERCENTAGE
LOW INCOME PERSON'S IMPROVEMENTS ON SUBURBAN TRACT OR CITY / TOWN LOTS			
3135	Income - 0%	4	0.0
3136	Income - 10%	4	0.386
3137	Income - 20%	4	0.772
3138	Income - 30%	4	1.158
3139	Income - 40%	4	1.544
3140	Income - 50%	4	1.93
3141	Income - 60%	4	2.316
3142	Income - 70%	4	2.702
3143	Income - 80%	4	3.088
3144	Income - 90%	4	3.474
LOW INCOME PERSON'S IMPROVEMENTS ON 1 ACRE FARMSTEAD			
3209	Income - 0%	14	0.0
3210	Income - 10%	14	0.309
3211	Income - 20%	14	0.618
3212	Income - 30%	14	0.926
3213	Income - 40%	14	1.235
3214	Income - 50%	14	1.544
3215	Income - 60%	14	1.853
3216	Income - 70%	14	2.162
3217	Income - 80%	14	2.47
3218	Income - 90%	14	2.779
6201	Personal Property Mobile Homes	12	3.86
LOW INCOME PERSON'S PERSONAL PROPERTY MOBILE HOMES			
6235	Income - 0%	12	0.0
6236	Income - 10%	12	0.386
6237	Income - 20%	12	0.772
6238	Income - 30%	12	1.158
6239	Income - 40%	12	1.544
6240	Income - 50%	12	1.93
6241	Income - 60%	12	2.316
6242	Income - 70%	12	2.702
6243	Income - 80%	12	3.088
6244	Income - 90%	12	3.474
6245	Income - 100% Disabled Veterans Mobile Home	12	0.0

PART 3: DATA COLLECTION**A31.2. PROPERTY CLASSIFICATION CODES (Cont'd.)**

CODE	DESCRIPTION	CLASS	PERCENTAGE
6601	First Year New and Expanding Industry - Air and Water Pollution Control Facilities	5	1.5
6602	Second Year New and Expanding Industry - Air and Water Pollution Control Facilities	5	1.5
6603	Third Year New and Expanding Industry - Air and Water Pollution Control Facilities	5	1.5
6604	Fourth Year New and Expanding Industry - Air and Water Pollution Control Facilities	5	1.5
6605	Fifth Year New and Expanding Industry - Air and Water Pollution Control Facilities	5	1.5
6606	Sixth Year New and Expanding Industry - Air and Water Pollution Control Facilities	5	1.8
6607	Seventh Year New and Expanding Industry - Air and Water Pollution Control Facilities	5	2.1
6608	Eighth Year New and Expanding Industry - Air and Water Pollution Control Facilities	5	2.4
6609	Ninth Year New and Expanding Industry - Air and Water Pollution Control Facilities	5	2.7
6811	Air and Water Pollution Control Facilities	5	3.0
6815	All Gasohol Related Property	5	3.0
8311	Electric Company Mileage	11	12.0
8312	Electric Company Situs	11	12.0
8313	Natural Gas Company Mileage	11	12.0
8314	Natural Gas Company Situs	11	12.0
8315	Gas and Electric Company Mileage	11	12.0
8316	Gas and Electric Company Situs	11	12.0
8331	Rural Electric and Telephone Co-op Mileage	5	3.0
8332	Rural Electric and Telephone Co-op Situs	5	3.0
8513	Railroad Company Mileage	15	Determined Annually
8514	Railroad Company Situs	15	Determined Annually
8515	Airline Company Flight Property	17	12.0
8516	Airline Company Situs	17	12.0
8517	Pipeline Company Mileage	11	12.0
8518	Pipeline Company Situs	11	12.0
8519	Telecommunication Company Mileage	11	12.0
8520	Telecommunication Company Situs	11	12.0
8523	Independent Telephone Company Mileage	7	8.0
8524	Independent Telephone Company Situs	7	8.0

32. COMMON CAMA DATA

TABLE OF CONTENTS

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
010	GEOCODE OR PARCEL IDENTIFICATION	1	301-330	LAND CLASSIFICATION CODE	22
060	MAP	13	331-336	AGRICULTURAL LAND TOTALS	22
070	ROUTING NUMBER	14	340	AGRICULTURAL IRRIGATION	22
101	PROPERTY TYPE	14	341	TIMBER	23
102	IMPROVEMENT CLASSIFICATION CODE	15	400	TOPOGRAPHY	23
103	LIVING UNITS	15	410	UTILITIES	24
104	ZONING	16	420	ACCESS	24
105	NEIGHBORHOOD	16	430	FRONTING	25
110	PROPERTY ADDRESS	16	440	LOCATION	25
115	CAMA CHANGE CODES	17	450	PARKING	26
170	ECONOMIC CONDITION FACTOR	17	461-463	APPRAISAL INSPECTION INFORMATION	26
180	PERCENTAGE OF OWNERSHIP	17	464	PERSON CONTACTED	27
190	PARCEL TIEBACK	17	468	CONTINUED REVIEW NEEDED	27
191	CONDOMINIUM OWNERSHIP		471-472	BUILDING / ELECTRICAL PERMIT	
	PERCENTAGES	18		RECORD	28
201-203	SALES DATA	18	481-483	NOTES	28
299	DELETE: LAND	19	885	APPEAL ADJUSTMENT: LAND	28
300	NONE	19	886	APPEAL ADJUSTMENT: MAIN BUILDING	29
301-303	FRONT FOOT	19	887	APPEAL ADJUSTMENT: ACCESSORY	
305	1982 STANDARD DEPTH	20		BUILDING	29
311-313	SQUARE FOOT	20	888	APPEAL ADJUSTMENT: FLAT VALUE	29
321-329	ACREAGE	20	891-897	OVERRIDE CODE & VALUE	29
301-329	INFLUENCE FACTORS	21	960	FINAL BASE VALUE	29
330	SITE	22			

CONTENT OF DATA FIELDS

All of the data common to Residential, Agricultural, Commercial and Industrial parcels is contained in five screens. The following list shows the fields in numerical order and describes the data requirements for them. It also shows the number of the screen that contains the field.

010 GEOCODE OR PARCEL IDENTIFICATION

Required RES / COM RS

COUNTY - For the purpose of the Mass Appraisal System, each county is identified by the number currently being used on the automobile license plates. Counties have been assigned numbers from 01 to 56. (See Table in Appendix) That portion of Yellowstone National Park which is located in Montana, but is not within any county, has been arbitrarily assigned the number 57.

For example, the county license plate number of Lewis and Clark County is 5. Each single digit number is always prefixed with a leading zero. Enter 05 in the COUNTY field for all properties within Lewis and Clark County.

ASSIGNED TOWNSHIP NUMBER - Townships are a part of the federal rectangular survey system, which is a land identification system. Under this system, land is divided into townships 6 miles square, which are related to base lines established by the federal government. The base line running north and south is known as the "Principal Meridian" while the east and west base line is simply called the "Base Line". The township numbers east or west of the "Principal Meridian" are designated as ranges whereas the numbers north and south of the "Base Line" are tiers. (See Figure 32-1.)

Ranges West			Ranges East		
			3N		
			2N		
3W	2W	1W	1N 1E	2E	3E
	Base		1S	Line	
			2S		
			3S		

Meridian

Principal

Townships North

Townships South

Figure 32-1. Townships in Relation to the Principal Meridian and Base Line.

For example, the shaded township in Figure 32-1 would be described as "Township 3 North, Range 2 East," meaning that the township is situated three tiers north of the Base Line and two tiers east of the Principal Meridian.

Just as unique numbers have been assigned to counties, it has also been necessary to assign a unique number to each township or portion of a township that lies within any county in the state. This has been done for two purposes. One is to shorten the number of characters required to identify the township and the second is to provide a basis for a computer audit of the legal description carried on each property.

A list of each township designation in Montana, together with the assigned township number and the assigned number for the county in which the township is located, will be found in the Master List of Assigned Township Numbers.

Numbering Townships

Townships have been arbitrarily numbered starting with the most westerly township or part of a township in the most southerly tier of townships. This most southwestern township in the state was

numbered "0001". The next easterly township (or part of one) on the same tier of townships was numbered "0002". The next easterly township was numbered "0003". This process was continued until each township or portion of a township in the most southerly tier was consecutively numbered from west to east.

This process was continued on the next most southerly tier of townships and each next most southerly tier of townships until all the townships or parts of townships in each county in the state were numbered.

Townships Split by County Lines (See Figure 32-2.)

Lewis & Clark County		Cascade County	
17 N	2661	2663	2664
		2662	
16 N	2551	2552	2553
			2555
			2554
15 N	2445	2446	2447
	4 W	3 W	2 W

Figure 32-2. County Line Cutting Across Townships.

When a county line bisects a township, as shown in Figure 32-2, each portion of the township is assigned a separate number.

Enter the ASSIGNED TOWNSHIP NUMBER for the parcel, if necessary, use leading zeros.

SECTION - A township is six miles square or 36 square miles. Each square mile is designated as a section which is equivalent to 640 acres. Sections within a township are numbered from the northeast

PART 3: DATA COLLECTION

corner, following a back and forth course, until the last section in the southeast corner is reached. For purposes of land description, sections are commonly divided into half sections containing 320 acres, quarter sections containing 160 acres, etc. Land acreage descriptions are then made by referring to a particular quarter of a particular section located within a particular township, county and state. (See Figure 32-3.)

Figures 32-3 and 32-4 demonstrate the subdivision of townships into smaller units. The legal description of the shaded portion of Figure 32-3 is: Section 23 Township 4N, Range 4E of the Montana Principle Meridian, County of Gallatin, State of Montana.



Figure 32-3. Subdivision of Township 4 North, Range 4 East into Sections of One Mile on Each Side.

The legal description of the shaded portion of Figure 32-4 would be NE4 of the SW4 (which is read "the Northeast quarter of the Southwest quarter") of Section 23, Township 4N, Range 4E of the Montana Principle Meridian, County of Gallatin, State of Montana.

Because of the curvature of the earth, the north/south lines of ranges converge as they extend toward the north pole. To keep the range lines as nearly six miles apart as possible, the lines are laid out for approximately 24 miles, and then jog so that they are again six miles apart to preserve, as nearly as may be possible, the square shape of the townships. The irregular shaped areas created in the correction are usually along the north and west

sides of a township and are referred to as lots (Government Lots) and are approximately forty acres in size.

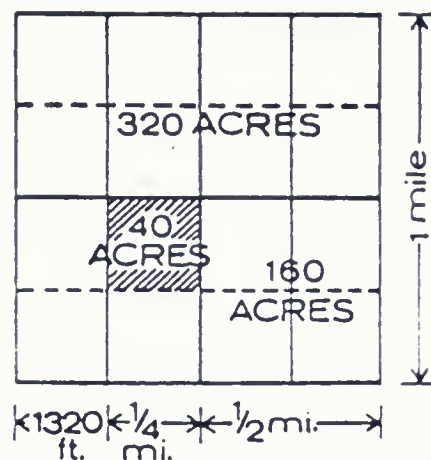


Figure 32-4. Subdivision of Section 23 Showing 320 Acre Half Section, 160 Acre Quarter Section, and (Shaded) a Quarter Section Block of 40 Acres.

Enter the SECTION NUMBER for the parcel, if necessary, use leading zeros.

QUARTER SECTION - The Quarter Section number assigned to a parcel is the Quarter Section in which the Quarter Section Block is located. Quarter Sections are numbered counterclockwise as follows: NE = 1, NW = 2, SW = 3, SE = 4. (See Figure 32-5.)

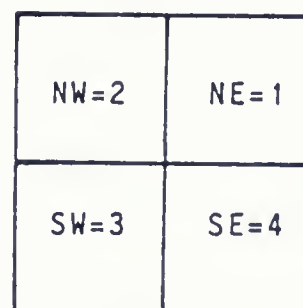


Figure 32-5. Numbering Pattern for Quarter Sections.

The Quarter Section, Block, and Lot sequence is a filing number designed to facilitate administrative record keeping and aid in field appraisal work, particularly in densely populated areas with a large

number of parcels per section. These numbers are arbitrarily assigned and *may or may not* have any relationship to block or lot numbers used in a legal location within a section.

Assignment of Quarter Section

The following rules are to be used to determine what Quarter Section a Quarter Section Block is numbered in *after* the block boundaries are delineated.

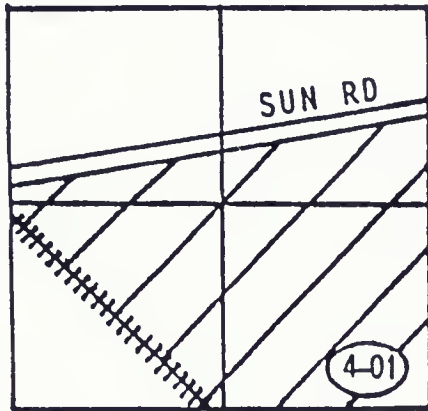


Figure 32-6. A Quarter Section Block Lying in Several Quarter Sections.

Rule 1, a Quarter Section Block that is partly in two or more Quarter Sections will be numbered in the Quarter Section where the *majority* of the block lies, as shown in Figure 32-6.

Rule 2, a Quarter Section Block that is *equally* in two or more Quarter Sections will be numbered in

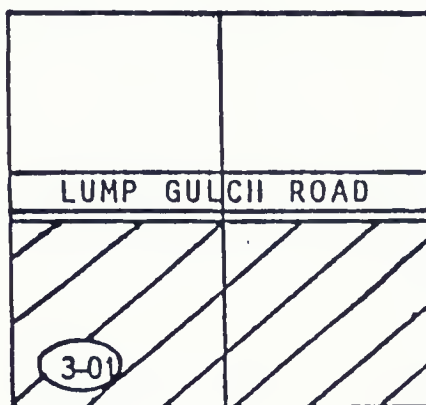


Figure 32-7. A Quarter Section Block Lying Equally in Two Quarter Sections.

the lowest numbered Quarter Section, as shown in Figure 32-7.

Rule 3, a Quarter Section Block that occupies an *entire* section will be numbered in Quarter Section 1, as shown in Figure 32-8. The only exception to the rule would be farmsteads. If you have agricultural land with a farmstead, code the Quarter Section where the farmstead is located.

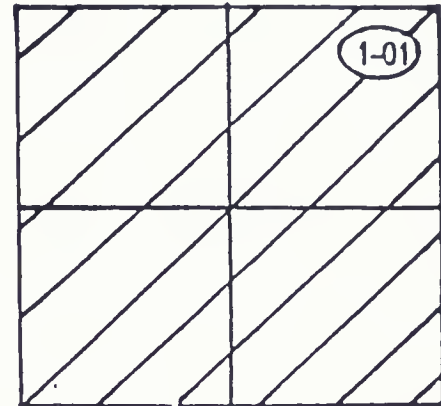


Figure 32-8. A Quarter Section Block Occupying an Entire Quarter Section.

QUARTER SECTION BLOCK - A Quarter Section Block is an area bounded on all sides by physical features or by boundaries which must be retained for taxing purposes.

Quarter Section Block Boundaries

The following features *must* be used as block boundaries.

- State and county boundaries
- Section lines
- Streets
- Railroad tracks

NOTE: This does not include spur lines that *do not* divide private ownership. In railroad yards, only the outermost tracks should be used as block boundaries.

The following features *may* be used to subdivide large, irregularly shaped or complex blocks. The Area Manager should be consulted before using the following for block boundaries.

PART 3: DATA COLLECTION

- Streams, rivers (as denoted on the USGS Quadrangle Map Series), and other bodies of water. (Including double-line drainage)
- Private roads that serve two or more residences.
- In some situations, "imaginary" extensions of streets (these are to be indicated on the maps as a series of small dashed lines) may be used. However, "imaginary" extensions *may not be used* when any one of the features listed above is available. (See Figure 32-9.)

If an "imaginary" extension of a street is to be used, it is subject to the following conditions:

- The extension cannot exceed 300 feet in length.
- The exact location of the beginning point of the extension must be readily identifiable. For example, the extension must never have its beginning point somewhere along a curve of a street. The location of the extension must be clearly visible on the map.
- Street extension *can never* be established where they would *split* a parcel. (Quarter Section Lot) For example, cul-de-sacs must never be extended, because parcels are frequently located at the end.
- Street extensions must be "straight-line" extensions and must intersect the first visible map feature along the extension.
- In areas where extensive use of cul-de-sacs make street extensions impossible, the parcels on the cul-de-sac (or multiple cul-de-sacs) may be delineated as a Quarter Section Block. (See Figure 32-9.)

The following do not in themselves create Quarter Section Block boundaries.

- Quarter section lines
- Incorporated city or town limits
- School district boundaries
- Addition or subdivision boundaries

Numbering of Quarter Section Blocks

Quarter Section Blocks are consecutively numbered from left to right and from south to north within a

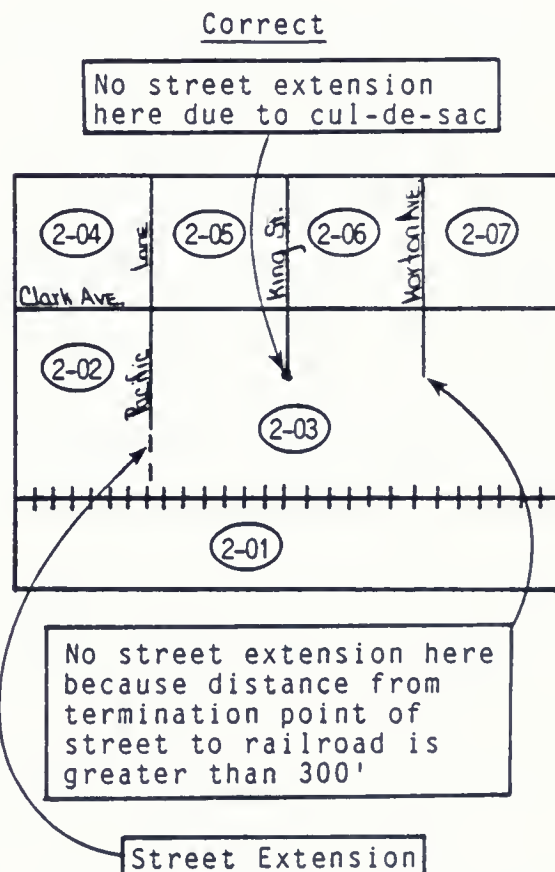
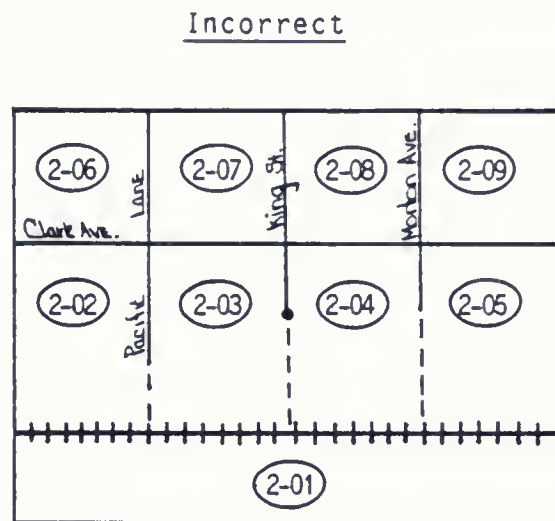


Figure 32-9. Incorrect and Correct Usage of the "Imaginary" Street Extension.

Quarter Section. (See Figure 32-10) See QUARTER SECTION to determine in which Quarter Section a Quarter Section Block should be numbered.

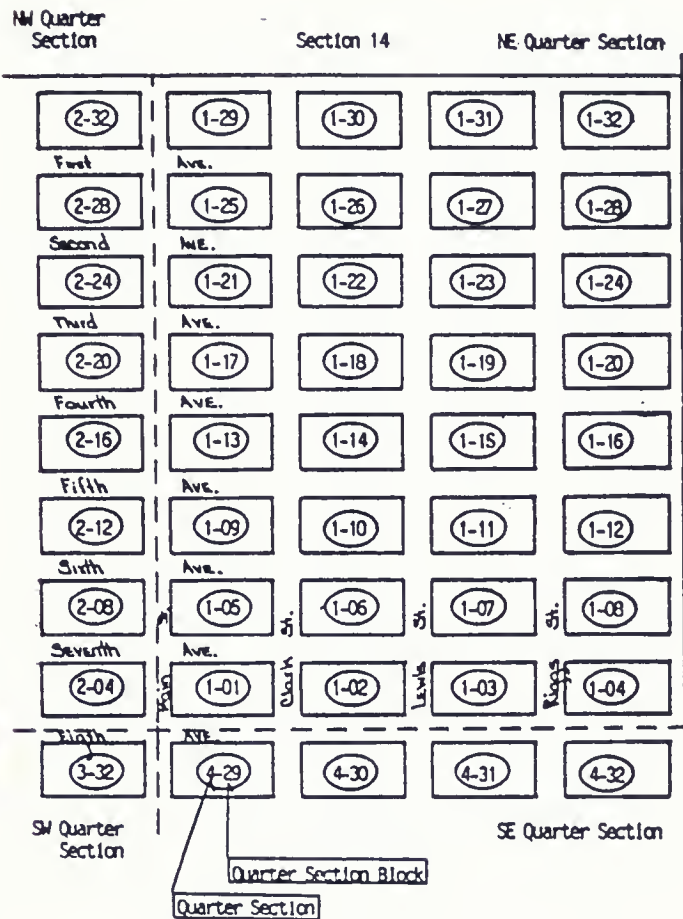


Figure 32-10. Quarter Section Block Numbering Pattern.

NOTE: The use of a section map or city/town map as a control map for Quarter Section Block numbering in urban areas is recommended. The block number can then be transcribed from the control map to the map on which the parcels will be delineated.

There are areas where the consecutive numbering of Quarter Section Blocks is not advisable. This is particularly true in developing areas or areas of rapid growth. In those areas and with the counsel of the Area Manager, it is permissible to leave spaces in the numbering sequence.

If there are any Quarter Section Blocks within a Quarter Section, there *must* be a block number "01". A Quarter Section Block that occupies the *entire* section will be numbered block 01 of Quarter Section 1. (See Figure 32-11.)

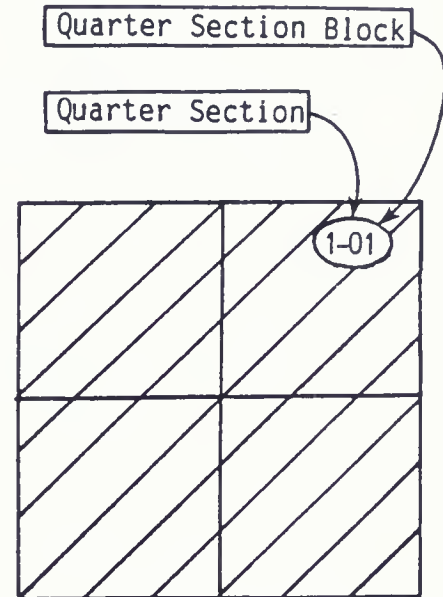


Figure 32-11. Quarter Section Block Numbering for a Single Parcel Occupying an Entire Section.

Quarter Section Block numbering *CANNOT* exceed 99 for one Quarter Section. If the block numbering does exceed 99, consult your Area Manager to help make the necessary corrections.

When an addition block is in more than one section, a separate Quarter Section Block Number may be assigned to each "piece" of the addition block in each section. (See Figure 32-12) However, it is acceptable practice to "bend" the section line around the entire block or down an alley, depending on what makes sense for that particular case.

REMEMBER: This system is to *aid* field review.

When two or more addition blocks are joined together by vacated streets, one Quarter Section Block number is assigned.

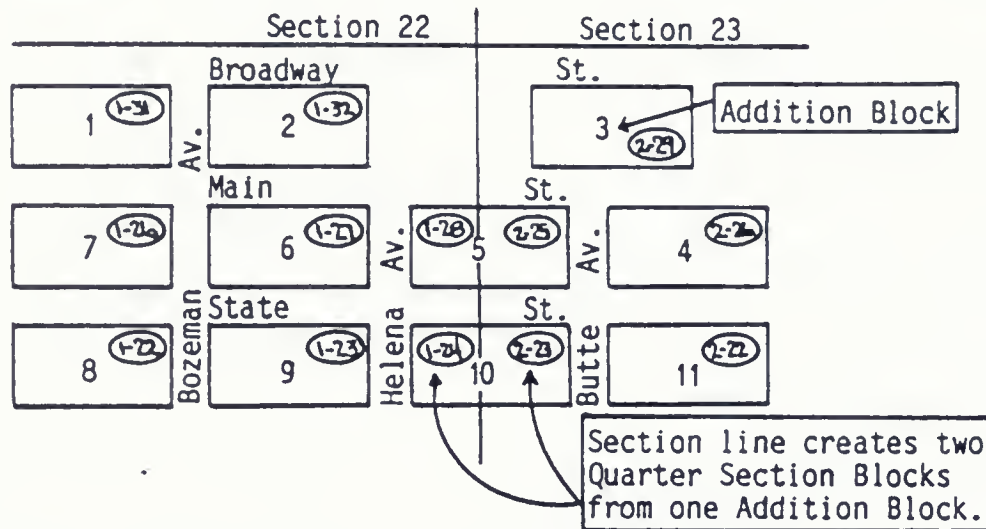


Figure 32-12. Quarter Section Blocks Created from Addition Blocks by the Section Line.

If one person owns both blocks or contiguous land in both blocks, use the SHORT LEGAL DESCRIPTION field to further explain that the vacated streets are also included as well as describing a full legal description of block and lots involved in the parcel.

Map Preparation

Source Map Hierarchy - All features that are used as Quarter Section Block boundaries *must* be shown on all maps. The hierarchy of source maps for locating these features is:

- USGS Quadrangle Map Series
- general highway maps
- maps from the county appraiser or assessor's office.

Labeling Features - All roads, rivers, railroads and other features on maps should be labeled with their commonly used name. It is important that the *same* name be *consistently* used for any one feature throughout a county. (See Figure 32-13.)

QUARTER SECTION LOT - A Quarter Section Lot (also known as a parcel) is a contiguous area of land described in a single description in a deed or as one of a number of lots on a plat, separately owned, either publicly or privately; and capable of being separately conveyed. The only exceptions to this definition are "lots" formed by the bisection of

a single ownership by a section line or a taxing jurisdiction such as an incorporated city, town or a school district.

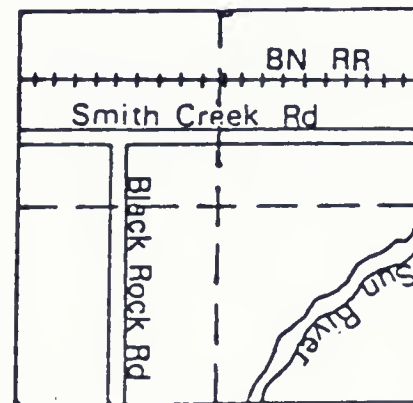


Figure 32-13. Road, River, and Railroad Labeling.

Quarter Section Lot Boundaries

A Quarter Section Lot is a contiguous ownership. A lot may also be divided by the following features:

- Quarter Section Block boundaries
- Dedicated alleys
- Taxing jurisdictions
- Incorporated city or town limits
- School district boundaries

A Quarter Section Lot may also be created to uniquely code ownerships as need be listed on the assessment (tax) roll. The Area Manager must approve all such lots and care should be taken to properly document them.

A section line (a Quarter Section Block boundary) DOES NOT break a platted lot or tract in a dedicated addition or subdivision.

- The section line must be "bent" around the lot (or tract) so that the lot (or tract) is coded in the section where the majority of the lot (or tract) lies. (See Figure 32-14.)

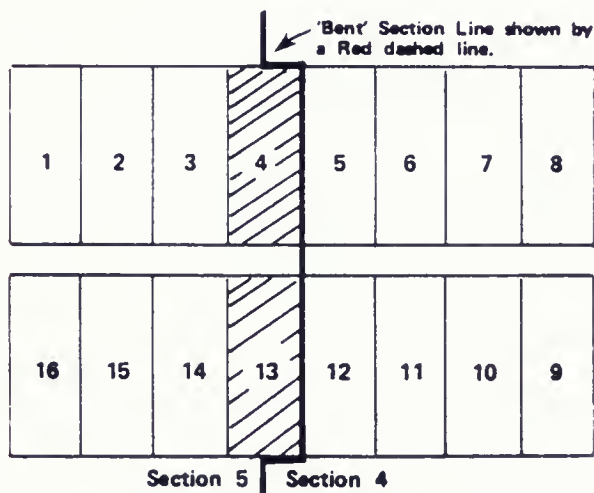


Figure 32-14. A Section Line "Bent" Around Tracts.

- The "bent" section line will be shown by a RED DASHED line. Both the actual section line and the "bent" section line are to be indicated on the map.
- The "bending" of the section line should be done to minimize confusion in the field. It is an acceptable practice to "bend" the line around an entire platted block or down an alley, depending on what makes sense for that particular case.

REMEMBER: This system is to *aid* field review.

Numbering of Quarter Section Lots

The numbering of Quarter Section Lots should only be done AFTER all land within the Quarter Section Block has been accounted for and each ownership delineated (in orange if needed).

The Quarter Section Lot numbers are assigned independent of the addition lot numbers. Quarter Section Lots reflect ownerships within a block. The typical numbering sequence is counterclockwise around the block. (See Figure 32-15.)

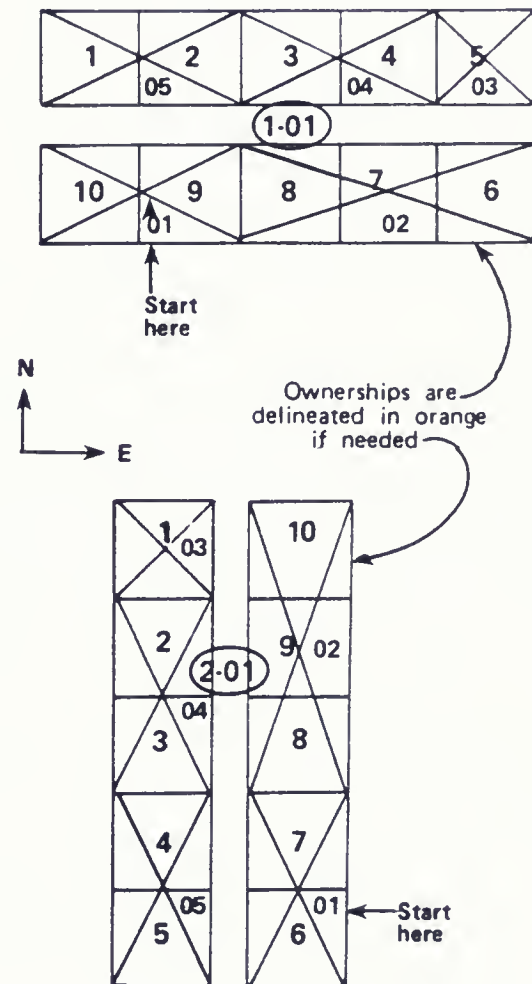


Figure 32-15. Assignment of Quarter Section Lot Numbers.

The Quarter Section Lot sequence is to AID the appraiser in field appraisal work. The lot numbering sequence should be thought of as the order in which one would drive from parcel to



Parcels on a cul-de-sac - All parcels fronting on a cul-de-sac should be numbered in sequence, because typically the front of the house faces the cul-de-sac. If a parcel is bounded by both a cul-de-sac and a road, still number the parcel in sequence with the other parcels on the cul-de-sac. (See Figure 32-16.)



Parcels on an alley - If a parcel fronts on an alley, number that parcel after the parcel that is in front of it. Frequently, a parcel is the back half of several lots and is fronting on the cross street. Again, number that parcel in sequence with the parcel in front of it. (See Figure 32-17.)

Parcels in an area of mixed property type - In areas of mixed property types (i.e. residential and agricultural) and/or varying sized parcels, number all Quarter Section Lot parcels as if driving from one "front door" to the next. Access to the improvements on the parcel for field appraisal work should be of prime consideration. (See Figure 32-18.)



For every Quarter Section Block there MUST be a Quarter Section Lot 01. A parcel that occupies an entire section must be Lot 01. There can only be one Lot 01 per block. (See Figure 32-19.)

Quarter Section Lot numbering CANNOT exceed 99 for one Quarter Section Block. If the lot numbering does exceed 99, the Area Manager should be consulted to help make the necessary corrections.

While it is desirable to consecutively number lots, it may not be prudent to do so.

Depending on the locale, the sale activity, etc., consecutively numbering lots may cause more work than is necessary. Individuals aware of the local situation (i.e. appraisers, mapping clerks) should be consulted before lot numbering.

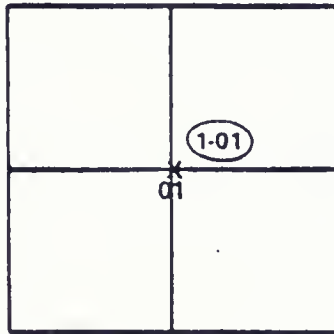


Figure 32-19. Quarter Section Lot Numbering Where a Parcel Occupies the Entire Section.

Unique Quarter Section Lots

Quarter Section Lots are an identifier of ownership. The following types of ownerships are uniquely coded and are therefore treated separately.

Condominiums - Each condominium unit is treated as a lot. The entire condominium complex (as given on the unit declaration or master deed) is assigned one Quarter Section Block number. Individual ownerships within the condominium complex may also be identified by the Unit Number.

Improvements on leased land - An improvement on leased land is considered to be a Quarter Section Lot separate and distinct from the lot identifying the land. The Quarter Section Lot for the land should be numbered first, then the lots describing the improvements should be numbered in a driving order sequence. (See Figure 32-20.)

UNIT NUMBER - The Unit Number identifies the property rights associated with each parcel.

Ownership of real property carries with it certain privileges. As a means of illustration, these rights or privileges are referred to as a "Bundle of

Rights" and can be compared to a bundle of sticks, wherein each stick represents a distinct and separate right or privilege of ownership. These rights are inherent in ownership of real property and guaranteed by law, but subject to certain limitations and restrictions. They are the right to use real property, to sell it, to lease it, to enter it, to give it away, and the right to refuse to exercise any of these rights. [1]

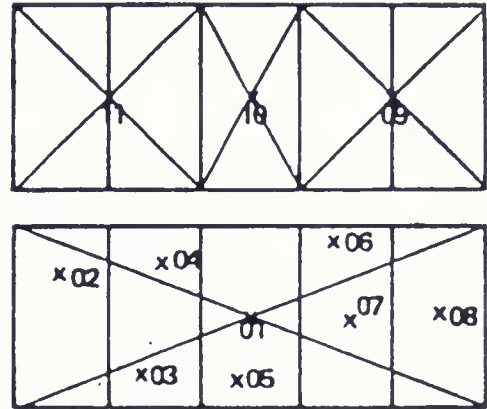


Figure 32-20. Quarter Section Lots 02 Thru 08 Show Numbering of Improvements on Leased Land.

These rights may be held by different individual owners. For example, one may own the rights to the improvements on a parcel, while another retains ownership of the surface and the remaining rights. This is called a physical partial interest.

A different type of division of rights occurs when one right is owned by several individuals in some proportion. An example of this type of division would be if two individuals own a parcel. One person owns a 1/4 interest and the other owns 3/4 interest. This is referred to as a legal partial interest.

Another way to picture the difference between physical partial interest and legal partial interest is

[1] American Institute of Real Estate Appraisers, *The Appraisal of Real Estate*, 7th ed. (Chicago: Author 1978) p.15.

PART 3: DATA COLLECTION

by comparison with a layer cake. Each layer represents a physical partial interest (air rights, surface, improvements on the surface, subsurface, etc.) Legal partial interest can then be thought of as a slice of the cake. There may be many slices (or ownerships) and some may or may not be larger than others.

Because the division of rights either physically or legally affects value, it is important to identify what rights are associated with each parcel. The UNIT NUMBER provides a means to identify the "breakdown" of rights for a parcel. If all of the rights to a parcel are held by one individual, UNIT NUMBER is coded "0000".

However, if there is either physical or legal partial interests (or both) in a parcel, the first ownership is coded "0001"; the second "0002"; the third ownership "0003"; and so forth until all ownerships are identified and numbered. The rights to each particular ownership are enumerated in detail in the SHORT LEGAL DESCRIPTION field. If a parcel has any type of partial interest, no ownership should be coded "0000".

The UNIT NUMBER has a second purpose in the Parcel Identification System. In situations where the standard methods utilized for Parcel Identification are not suitable, the unit number can be utilized to uniquely identify a parcel. Since unit number is an alphanumeric field with four positions, the combinations of unique numbers that can be created within a Quarter Section Lot are basically infinite. Assuming that you have more than 99 lots within a Quarter Section Block, the unit number can be utilized to expand the limits of the Parcel Identification Number.

An example is:

COUNTY	07
TOWNSHIP	3966
SECTION	07
QUARTER SECTION	3
QUARTER SECTION BLOCK	28
QUARTER SECTION LOT	01-99
	possible
UNIT NUMBER	0000

In order to establish "uniqueness", only 1 digit must change at any position in the Parcel Identification Number. The COUNTY through QUARTER SECTION LOT are constrained by fairly rigid usage rules. In contrast, Unit Number is basically free form. The example above has 99

Quarter Section Lots possible under standard parcel identification data coding rules. By changing the unit number to any other number or alphabetic characters, the Quarter Section Lot can be expanded another 99 positions for each change of the unit number.

Another example might be in the description of mobile home parks. By standardizing the Parcel Identification Number for a mobile home park by using a Quarter Section Block of 01 and a Quarter Section Lot of 01, the Unit Number can be varied to identify which space the mobile home occupies. Perhaps a Unit Number series from M001 to M999 might be applicable in situations where the number of mobile homes exceeds 100. In situations where less than 100 mobile homes exist, MH01 to MH99 might be applicable.

Caution should be utilized when using the unit number to uniquely identify parcels. Since the field is alphanumeric the results of key data sorts for worksheets, cost computation sheets, valuation rolls, etc., are unpredictable and you may split areas when printing out records. *Please note that alphabetic characters coded in the unit number will be sorted before numeric characters.* For example, AAAO will sort prior to 0000, MOB1 prior to 0000, etc.

It is advisable that you reserve unit numbers from 0000 to 0999 for the standard "division of rights". All other numbers are free for your use, and are unique within any given quarter section, quarter section lot or quarter section block.

In situations where a subdivision is already mapped by quarter section block or lot in the original plat, and that description is not unique to the quarter section, the unit number can be utilized to make that coding unique. Simply assign a unique unit number for each subdivision within the quarter section and use the lot and block numbers as assigned in the original plat.

Another unique numbering system (used successfully in some areas of the state) uses the Quarter Section Number Scheme and the Quarter Section Block and Lot or Unit Number to identify the location of farmsteads.

Let's assume (for example purposes) we have a farmstead located in the SW4 (southwest quarter) of the SE4 (southeast quarter) of Section 26. Since we already identify the SE4 of Section 26 in

the QUARTER SECTION field as a 4 we can then break the SW4 of Quarter Section 4 into 4 more parts. (See Figure 32-21.)

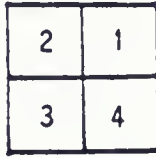


Figure 32-21. Quarter Section Broken into Quarters.

Using the standard number scheme we then identify the SW4 of Quarter Section 4 with a "3". The geocode could look like this:

COUNTY	00
TOWNSHIP	9999
SECTION	26
QUARTER SECTION	4
QUARTER SECTION BLOCK	03 Indicates SW4 of QUARTER 4
QUARTER SECTION LOT	00
UNIT NUMBER	would be coded 0003 for this parcel if you preferred to use Quarter Section Block 01 and Quarter Section Lot 01.

This system can be utilized down to a parcel the size of 2.5 acres by using the Unit Number and the existing QUARTER SECTION. If QUARTER SECTION was coded 3 or SW4 and the Unit Number was coded 4223, then the parcel would be located in the SE4NW4NW4SW4 of the section the parcel was located in. (See Figure 32-22.)

Should you plan to use the UNIT NUMBER to uniquely identify parcels in your County, you should contact your Area Manager to inquire about standards in your area.

CARD NUMBER - Enter the sequential number assigned to each particular card of a parcel. For example for parcels requiring one card, enter 01 on the first card; for parcels requiring two cards, enter 01 on the first card and 02 on the second card; etc,

up to 99 cards per parcel. A card number must be entered on every card.

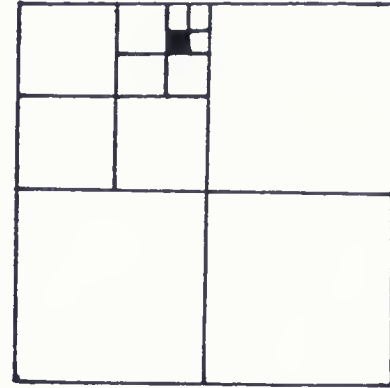


Figure 32-22. The Location (Shaded) of Unit Number 4223, Southwest, Northwest, Northwest, of the Southwest Quarter of Section 26.

060 MAP RES / COM S1
Optional

Three character positions are provided to enter numeric characters denoting the division of properties defined on an individual map. The purpose of this field is for geographical sorting of output reports.

The Map Code uniquely identifies each map as to township, section and area. The Map Code, in total, is a nine digit number consisting of three fields; ASSIGNED TOWNSHIP, SECTION, and MAP. Only the last three digits of the Map Code are to be coded in this field.

The Map Code is adaptable to all maps in all counties. The Map Code will be placed in the lower left-hand corner of the map and on any folder containing parcels geocoded on that map.

**First Field - ASSIGNED TOWNSHIP
NUMBER**

Field one is the four digit ASSIGNED TOWNSHIP NUMBER of the township in which the mapped area lies. Mapped areas of multiple townships will use the lowest numeric assigned township number.

PART 3: DATA COLLECTION

Second Field - SECTION NUMBER

The two digit SECTION NUMBER is the second field. If the entire mapped area is in one section, use that section number.

- For maps covering property in more than one section, but all in the same township, use the lowest section number.
- For mapped areas in more than one township, use the lowest numbered section in the township with the lowest assigned township number. This may not always be the lowest section number on the map.

Third Field - MAP or the Mapped Area

The third field of three digits MAP designates the mapped area. Any of the following eight methods may be used to designate the third field for a map.

- Township maps and/or computer generated maps: These maps are always coded "XXX".
- Individual section maps: For a map of a complete section, this field is coded "XXX".
- Multiple maps of a section: It is possible to have several maps of the unplatted area of one section. In this case, the third field should be "XXX". To differentiate these maps, the appraiser may choose one of the following:
 - a. The last one or two spaces may be used for numeric digits reflecting a number assigned to the map.
 - b. Each map may carry a notation (aside from the code) to indicate it is one of several maps, (i.e., 1 of 2, 2 of 2). This would not be part of the actual map code and would primarily serve in the filing of and accounting for the maps.
- Individual Subdivision/Addition: A map of a complete subdivision/addition will have that subdivision's or addition's three digit addition code for the third field.
- Certificate of Survey: A certificate of survey will be treated exactly like an individual subdivision map using its three digit addition code in this field.
- Multiple maps of a Subdivision/Addition: If a subdivision, due to its scale and/or size, is drawn on more than one map, use the notation method of 1 of 4, 2 of 4, etc. This notation will not be coded but will serve in the filing of and the accounting for the maps.
- Maps of Multiple Subdivisions/Additions: For maps covering more than one subdivision but not an entire municipality, the third field will be the alphabetically lowest addition code.
- Municipality Maps: If an entire municipality is contained on one map, use the three digit municipality code for this field. Do this even if there may be more than one subdivision in that municipality.

070 ROUTING NUMBER RES / COM S1 Optional

Enter three numeric characters (ranging from 001 to 999) to the left of the decimal point, and two numeric characters (ranging from 01 to 99) to the right of the decimal point. This ROUTING NUMBER denotes the sequential routing assigned to each parcel of property. The purpose of this field is for geographical sorting of output reports to aid field work.

The character positions to the right of the decimal point are provided to facilitate the identification of property after an ownership split has occurred. For example a parcel with a ROUTING NUMBER of 022.00 is split into three parcels. The first split from the parcel is numbered 022.01, the second 022.02, and the third 022.03.

NOTE: For parcels requiring multiple cards to list the information, the ROUTING NUMBER must be entered on each card.

101 PROPERTY TYPE RES / COM S1 Required

Enter the code that best describes the specific real property type of the subject parcel. The basis for this classification is the actual present day use. This field consists of two characters; the first character indicates the general category for appraisal purposes, and the second character is used for a more definitive breakdown of each property type.

AR	AGRICULTURAL RURAL: Agricultural/Timber land located in unincorporated areas of the county.	MC	MINING CLAIMS: All mining claims which are patented by the United States Government. This property type is reserved for <i>class 18 properties only</i> .
AU	AGRICULTURAL URBAN: Agricultural/Timber land located within an incorporated area of the county.	NV	NON-VALUED PROPERTY: This code is to only be used for Condominium Master Parcels.
CA	CENTRALLY ASSESSED: All property located in a county which is centrally assessed.	RR	RESIDENTIAL RURAL: All dwellings and mobile homes located in unincorporated areas of the county.
CR	COMMERCIAL RURAL: All commercial property located in unincorporated areas of the county.	RU	RESIDENTIAL URBAN: All dwellings and mobile homes located within an incorporated municipality.
CU	COMMERCIAL URBAN: All commercial property located within an incorporated municipality.	TP	TRIBAL PROPERTY: Property located within Indian Reservation boundaries and owned by the tribe.
EP	EXEMPT PROPERTY: All parcels which have been granted an exemption. Included are Federal lands, State lands, City owned property, and properties which have been granted an exemption by the Department of Revenue for religious, charitable or educational uses.	VR	VACANT LAND RURAL: All vacant land located in unincorporated areas of the county.
FR	FARMSTEAD RURAL: Farmstead and associated land located in an unincorporated area of the county.	VU	VACANT LAND URBAN: All vacant land located within an incorporated municipality.
FU	FARMSTEAD URBAN: Farmstead and associated land located within a municipality.	102	IMPROVEMENT CLASSIFICATION CODE Required RES / COM S1 Enter the four numeric characters denoting the Improvement Classification Code for the improvements described on this card.
IU	INDUSTRIAL URBAN: All industrial property located within an incorporated municipality.		The CLASSIFICATION CODE is a coding system to identify the different types of taxable property that may be found within a parcel. This should not be confused with PROPERTY TYPE, which codes both land and improvements as one. The CLASSIFICATION CODE uniquely codes land and improvements as if each were a separate unit.
IR	INDUSTRIAL RURAL: All industrial property located in unincorporated areas of the county.		The complete listing of PROPERTY CLASSIFICATION CODES can be found in the Appendix of the Property Administration Data Section.
KR	CONDOMINIUM RURAL: All condominiums located in unincorporated areas of the county.	103	LIVING UNITS Optional RES / COM S1 Enter the number of living units present in the dwelling described on this card. A living unit is defined as any room or group of rooms designed as the living quarters of one family or household,
KU	CONDOMINIUM URBAN: All condominiums located within an incorporated municipality.		
LA	LOCALLY ASSESSED UTILITY PROPERTY		

PART 3: DATA COLLECTION

equipped with cooking and toilet facilities, and having an independent entrance from a public hall or from the outside.

For example, a single family residence contains one living unit, and the correct entry would be "001". An apartment building with 6 apartments in it, would be coded "006".

If the card describes a Commercial type structure, is vacant, or contains only auxiliary improvements, enter "000".

104 ZONING RES / COM S1

Optional

Enter the local zoning of the parcel. Space is provided to enter up to five alpha and/or numeric characters.

MULTI-USE - Enter an "X" to indicate there are multiple zoning regulations for this parcel.

NON-CONFORMING USE - Enter a "Y" to indicate there is evidence the parcel does not conform to the current zoning.

105 NEIGHBORHOOD RES / COM S1

Required

A neighborhood may be defined as a geographical area exhibiting a high degree of homogeneity in amenities, land use, economic trends, and improvement characteristics (such as structural quality, age, and condition).

NEIGHBORHOOD - Enter the three numeric characters (to the left of the hash mark) to denote the specific neighborhood identification number.

NEIGHBORHOOD SUFFIX - If a neighborhood has been broken into sub-neighborhoods, enter the one character sub-neighborhood code (to the right of the hash mark). If there is no sub-neighborhood, leave the position blank.

NEIGHBORHOOD TREND - Enter the code that best describes the trend of the neighborhood.

- 1 **DECLINING** - the neighborhood is on the downgrade, showing considerable evidence of deterioration in buildings, land usage, etc.
- 2 **STABLE** - the neighborhood is stable, showing evidence of good maintenance, with

land usages remaining in well-balanced conformity.

- 3 **IMPROVING** - the neighborhood is on the up-trend, with remodeling or razing of outmoded structures, land usages being upgraded, new construction, etc.

110 PROPERTY ADDRESS RES / COM S1

Required

NUMBER - Enter the Street Number for the parcel.

SUFFIX - Enter the Suffix of the Street Number. For example, apartments at the same street address, 1220 Main St., may be numbered; 1220 A Main St., 1220 B Main St., 1220 C Main St., etc. The A, B, and C are suffix addresses and should be entered in this field.

DIRECTION - Enter the Direction of the Street; i.e. N, S, E, W, NE, NW, etc. An example of a Street Direction is: 1220 West Main Street, west is the direction and should be abbreviated "W" and entered in this field.

STREET NAME - Enter the street name, left-justified. Leave one blank space between words, abbreviations and numbers. If the parcel has a fractional street number or letter designation, leave one blank space after the street name and designation and then enter that fractional street number or letter designation. Record any fraction by two digits separated by a slash ("/").

Blank spaces are to be used in lieu of periods and/or commas. Recommended abbreviations appear in the Appendix.

MUNICIPALITY or ZIP CODE - If the parcel is within a municipality and therefore the **MUNICIPALITY CODE** is not "XXX", enter the **MUNICIPALITY CODE** in this field.

Otherwise, if the parcel is not within a municipality and the **MUNICIPALITY CODE** is "XXX", enter the last three digits of the Zip Code for the area where the parcel is located. The first two digits are known to be "59" for the entire state. Be sure to only enter the last three digits.

115 CAMA CHANGE CODES RES / COM S1

Optional

Enter the code that best describes the reason that the CAMA record is being changed.

- 1 NEW CONSTRUCTION
- 2 LAND USE CHANGE
- 3 TO CORRECT PARCEL INFORMATION
- 4 PARCEL SPLIT
- 9 CONVERTED - no activity on this record

170 ECONOMIC CONDITION FACTOR RES / COM S2

Optional

ECONOMIC CONDITION FACTOR is defined as extraordinary economic obsolescence that *impacts all property located in a specific neighborhood, community, or geographic area*. The ECONOMIC CONDITION FACTOR attempts to correct for the difference between replacement cost less normal depreciation and market value as they may differ from locality to locality. Enter the ECONOMIC CONDITION FACTOR applicable to the parcel in whole percent, right-justified. If no economic condition factor is to be applied leave this field blank.

When coding the ECONOMIC CONDITION FACTOR, please follow the following guidelines:

- For adjustments which increase the improvement(s) value, code the percent of increase plus 100. For example: to increase the improvement(s) value by 25%, code 125.
- For adjustments which decrease the improvement(s) value, code the percent of decrease subtracted from 100. For example: To decrease the improvement(s) value by 20%, code 080.

180 PERCENTAGE OF OWNERSHIP RES / COM S2

Optional

Enter the percentage of ownership of the entire parcel, this includes both land and improvements. Enter the number as a percentage, *not* the numeric equivalent. The decimal point is implied and must not be coded. The full value of the parcel's components must be listed and not a prorated amount (e.g. SITE VALUE = \$3,500 and owner has a specified one-half ownership; enter the entire \$3,500 in SITE VALUE, not \$1,750). If there is no divided ownership, leave this field blank.

190 PARCEL TIEBACK RES / COM S2

Optional

There are two major reasons that the PARCEL TIEBACK field is used.

The first reason is for those properties, mainly agricultural, commercial, or industrial type properties, which involve a number of parcels for one major complex. For descriptive purposes only, and as an aid in the valuation of such multiple parcels per complex, enter the Parcel ID of the primary parcel on all associated parcels of a single economic complex.

The second major reason for use of the PARCEL TIEBACK field is for valuation of condominium type property. Enter the Parcel ID of the Master Condominium record, usually a commercial card.

CODE - Enter the code that indicates the type of PARCEL TIEBACK that has been entered.

- 1 CONDO MASTER - to indicate that the tieback parcel is a Condo Master parcel which includes the land and improvement characteristics of which the unit is a part. The cost value of the unit is equal to the percentage of ownership of the FINAL VALUE of the Condo Master.

The unit parcel is not processed by the Residential Cost Program.

- 2 COMMERCIAL - to indicate that the tieback parcel is the primary commercial parcel.
- 3 AGRICULTURAL - to indicate that the tieback parcel is the primary agricultural parcel for the property.

- 4 CONDO MASTER - to indicate that the tieback parcel is a Condo Master parcel which includes the common element land and improvement characteristics for the condominium complex of which the unit is a part. The cost value of the unit is equal to the percentage of ownership of the FINAL VALUE of the Condo Master *plus* the cost value of the unit as calculated by the Residential Cost program.

The unit parcel is processed by the Residential Cost Program.

PART 3: DATA COLLECTION

191 CONDOMINIUM OWNERSHIP PERCENTAGES RES / COM S2 Optional

CONDO GENERAL ELEMENT

PERCENTAGE - Enter the percentage of General Common Element Ownership in the condominium complex for the condominium unit described on this record. Enter the number as a percentage, *not* the decimal equivalent. The decimal point is implied and must not be coded. If there is no divided ownership, leave this field blank.

CONDO LIMITED ELEMENT PERCENTAGE - Enter the percentage of Limited Common Element Ownership in the condominium complex for the condominium unit described on this record. Enter the number as a percentage, *not* the decimal equivalent. The decimal point is implied and must not be coded. If there is no divided ownership, leave this field blank.

201-203 SALES DATA RES / COM S1 Optional

Space is provided to enter the data for three sales. The data is arranged in vertical columns. The data should be listed from top to bottom, allowing one line for each sale.

DATE - Enter the number of the month, the day of the month, and the last two digits of the year of the sale. Each position must be filled in. Use leading zeros if necessary.

TYPE - Enter the code that best describes the property that was included in the sale. Only one code may be entered per sale.

- 1 LAND ONLY
- 2 LAND & BUILDING
- 3 BUILDING ONLY
- 4 PERSONAL PROPERTY ATTACHED

AMOUNT - Enter the sales price of the sale. Right justify the entry, it is not necessary to fill in each position.

SOURCE - Enter the code that best describes the source of information used to verify the sale as being valid or invalid.

- 1 BUYER
- 2 SELLER
- 3 AGENT
- 4 MULTIPLE LISTING SERVICE (MLS)
- 5 OTHER

SALES VALIDITY - Enter the code which is most representative of the type of validity of the sales transaction after verification.

- 0 INVALID
- 1 VALID
- 2 VERIFIED VALID
- 3 VERIFIED INVALID
- 4 MULTI-PARCEL VERIFIED VALID

CONDITION OF SALE - Enter the code that best describes the condition of the sale. If there are no conditions and this is considered "an arms length transaction" enter "0" (zero).

- 0 None or Valid Sale
- 1 Forced Sale
- 2 Relative
- 3 Correct Deed or Establish Joint Tenancy
- 4 Other
- 5 Agricultural Land Sale
- 6 Decedent's Sale
- 7 Sheriff Sale
- 8 Government Purchaser
- 9 Court Decree
- A Sale is a gift
- B Purchaser & Seller Same
- C Doesn't Transfer Realty
- D Business Merger
- E Multiple Parcel Sale
- Z A code entered during the conversion and creation of the data file. The sale is valid, but it must first be reviewed by the Appraisal staff to be sure the parcel characteristics match the sale price. If they do match, change the "Z" to a "0" (zero) so that the sale is extracted to the Sales History file.

NOTE: If a sale is valid, coded "0", the computer system will enter an "X" in this position after the sale has been extracted to the Sales History File.

DELETE - Enter a "D" to delete a sale which has been extracted to the Sales History File. This may occur if a sale previously thought of as valid is determined at a later date to be invalid. Be sure to correct the **VALIDITY** and **CONDITION OF SALE** to indicate the reason the sale is invalid.

NOTE: After the sale has been removed from the Sales History File, the computer system will enter an "N" in this position.

LAND DATA

There are five categories of land entries - **NONE**, **FRONT FOOT**, **SQUARE FOOT**, **ACREAGE**, and **SITE**. Each entry begins with a field code number or line number. Immediately following the field number is a space to enter the land type description code, area of the land, unit price, any influence factors that should be applied to the value and the Class Code of the land segment.

Each land segment entry is valued independently, or separately. Each line is calculated "horizontally" and the land segment sub-totals are summed "vertically" for a total land value of the record.

If the Computer Assisted Land Pricing (CALP) sub-system is to be used to value a land segment, a **UNIT PRICE** of zero (\$0) should be entered. If any value other than zero is entered in the **UNIT PRICE** field, that value will be used in the calculation of the value for that land segment.

299 DELETE: LAND RES / COM GPD Optional

This is a computer file maintenance entry and normally will not be utilized on the field card. The purpose of the delete is to remove all data previously entered in the computer in fields 300 through 330. This function is initiated by selecting option "06" from the On-Line Menu of either the Residential or Commercial sub-systems.

300 NONE RES / COM S3 Optional

Used for cases where no land value is applicable for that card or record. Enter the code "0" when applicable. Cases that may require no land coded are:

- Multi-sequence cards - normally all land data is recorded on the first card of a multiple series. If this is the case, enter "0" in this field for cards 02 and greater.
- Building on leased land - if a card represents only a building value record, there is no land to be coded.
- Condominiums - in many cases the land for a condominium is owned in common and no attempt is made to segregate the land characteristics for the individual condominium. The land value is provided through the **PARCEL TIEBACK** process.

301-303 FRONT FOOT RES / COM S3 Optional

Use for all front foot lot value computations. Space is provided for three entries.

TYPE - Enter the **FRONT FOOT TYPE** code that best describes the land segment being entered.

- 1 **REGULAR LOT** - either an interior lot (i.e. bordered on two sides by adjacent lots), or a corner lot located at the street intersection with frontage on two sides.
- 2 **BACK LOT** - a lot without street or road frontage. Access is from an adjacent parcel. This entry must always be used in conjunction with a Regular Lot. The Back Lot entry must be immediately below the Regular Lot entry. The same Influence Factor must be used on the Back Lot as is used on the Regular Lot.
- 3 **IRREGULAR LOT** - a lot which is highly irregular in shape, such as a parcel on a cul-de-sac.
- 4 **WATERFRONT** - a lot that has frontage on a lake, stream, or other body of water.
- 5 **WATERVIEW** - a lot that has a view of a lake, stream, or other body of water that is significant to the value of the land.
- 6 **TRIANGULAR FRONT APEX** - a triangular shaped lot with the apex of the triangle pointed towards the street.

PART 3: DATA COLLECTION

- 7 TRIANGULAR BACK APEX - a triangular shaped lot with the apex of the triangle pointed away from the street.
- 8 NON-BUILDABLE - a lot on which it is impractical or impossible to build. For example; a lot through which runs a ravine or gully or a lot which has restrictions against building.
- 9 OTHER - a lot which is not otherwise described.

WIDTH - Enter the width of the land segment being described in this entry.

DEPTH - Enter the average depth of the land segment being described in this entry.

UNIT PRICE - Enter the price per front foot, in whole dollars, of the lot segment being described in this entry. If the Computer Assisted Land Pricing (CALP) sub-system is to be used to value this lot segment, enter a zero in the field.

305 1982 STANDARD DEPTH RES / COM S3 Optional

If the land for this parcel is valued on a front foot basis, enter the Standard Depth used for valuation during the 1982 reappraisal.

This entry will only appear on the computer terminal screen and not on the Data Collection Card.

311-313 SQUARE FOOT RES / COM S3 Optional

Use for all square foot lot value computations. Space is provided for three entries.

TYPE - Enter the SQUARE FOOT TYPE code that best describes the land segment being described.

- 1 PRIMARY SITE - land capable of being improved with a major structure, such as a dwelling or a commercial building. Normally this is the typical or zoned base lot size for the neighborhood.
- 2 SECONDARY SITE - an extra buildable lot or lots.

- 3 RESIDUAL - all excess land not considered necessary for support of the improvements. For the Income Approach to value, the value of this Residual land segment is added to the income less expense value of this parcel.
- 4 WATERFRONT - land that has frontage on a lake, stream, or other body of water.
- 5 WATERVIEW - land that has a view of a lake, stream, or other body of water that is significant to the value of the land.
- 6 UNDEVELOPED - land that has no major structure or other site improvements made to it.
- 7 NON-BUILDABLE - land on which it is impractical or impossible to build. For example; a lot through which runs a ravine or gully or a lot which has restrictions against building.
- 8 OTHER - land which is not otherwise described.

SQUARE FEET - Enter the area in square feet, to the nearest whole foot, of the land segment being described in this entry.

UNIT PRICE - Enter the price per square foot, to the nearest cent, of the land segment being described in this entry. If the Computer Assisted Land Pricing (CALP) sub-system is to be used to value this lot segment, enter a zero in the field.

321-329 ACREAGE RES / COM S4 Optional

Use for all acreage value computations. Space is provided for nine entries.

TYPE - Enter the ACREAGE TYPE code that best describes the land segment being entered.

- 1 PRIMARY SITE - land capable of being improved with a dwelling or other major improvements.
- 2 RESIDUAL - all excess land not considered necessary for support of the improvements. For the Income Approach to value, the value of this Residual land segment is added

to the income less expense value of this parcel.

- 3 FARMSTEAD - enter the area considered to be the farmstead of the parcel, usually the area around the farm dwelling.
- 4 CONTINUOUSLY CROPPED - those lands where the accepted practice is cropping at least 3 out of 4 years.
- 5 FALLOW - those lands where the accepted practice is to crop one year followed by a year of summer fallow.
- 6 IRRIGATED - those lands which are irrigated the majority of the time.
- 7 GRAZING - those lands, either native range or domestic range, which are used to support livestock.
- 8 WILD HAY - those lands where either native grass or alfalfa is cut a majority of years for hay.
- 9 TIMBER - forest land exceeding 15 contiguous acres that is capable of producing timber that can be harvested in commercial quantity.
- 0 NON-BUILDABLE - land on which it is impractical or impossible to build. For example, a lot through which runs a ravine or gully or a lot which has restrictions against building.
- A RIGHT OF WAY - *descriptive information only* - no land value will be produced for this land segment.

ACRES - Enter the area in acres, to the nearest thousandth acre (999.999), of the land segment being described in this entry.

GRADE - If this land segment is to be valued on a productivity basis, enter the grade of the land segment. The table of productivity grades is in the Appendix of this Section.

UNIT PRICE - Enter the price per acre, to the nearest cent, of the land segment being described in this entry. If the Computer Assisted Land Pricing (CALP) sub-system is to be used to value

this land segment, for either market or agricultural productivity purposes, enter a zero in the field.

301-329 INFLUENCE FACTORS

Optional RES / COM S3&4

Each land segment entry, with the exception of the "Site" entry, provides for entering up to two separate (any combination of two) one-digit INFLUENCE FACTOR CODES and a corresponding three-digit INFLUENCE PERCENTAGE.

INFLUENCE CODE - Enter the code that best describes the reason that the land segment value is influenced, positively or negatively, from the base neighborhood land model. A maximum of two codes may be entered for each land segment. An agricultural parcel may only be coded for ACCRETED and RELICTED influences.

- 1 UNIMPROVED - to indicate comparative value loss attributable to a lack of improvements.
- 2 EXCESSIVE FRONTAGE - to indicate comparative value loss attributable to excessive frontage in relation to utility.
- 3 TOPOGRAPHY - to indicate comparative value loss attributable to topographical features.
- 4 SHAPE or SIZE - to indicate comparative value loss (over and above the adjustment considered in lot sizing procedures) attributable to the shape or size of the lot in relation to its utility.
- 5 ECONOMIC - to indicate comparative value loss attributable to physical economic detriments influencing the site, i.e., a dwelling next to a landfill.
- 6 RESTRICTIONS or NONCONFORMING USE - to indicate comparative value loss attributable to restrictions regulating its use.
- 7 ISLAND PROPERTY - to indicate comparative value loss or enhancement attributable to the site being on an island.
- 8 FLOOD PLAIN - to indicate comparative value loss attributable to frequent flooding.

PART 3: DATA COLLECTION

- 9 CORNER/ALLEY - to indicate comparative value loss or enhancement attributable to corner and/or alley influence.
- A VIEW - to indicate comparative value enhancement attributable to the capability of the site to provide an appealing and desirable view.
- B NO ACCESS - to indicate comparative value loss attributable to a lack of access to the site.
- C ACCRETED - to indicate that the river has moved and land area has been gained. This description is descriptive only, no INFLUENCE PERCENTAGE is to be entered.
- D RELICTED - to indicate that the river has moved and land area has been lost. This description is descriptive only, no INFLUENCE PERCENTAGE is to be entered.

INFLUENCE PERCENTAGE - Enter the total influence percentage to be applied to the land segment. If two types of influences have been coded the percentage must be for both.

The INFLUENCE PERCENTAGE will be greater than 100% for positive adjustments, and less than 100% for negative adjustments. If no influence is to be applied to the land segment entry, simply leave all fields blank (indicating 100%).

330 SITE RES / COM S4

Optional

Use to (a) site-value irregular lots, residual land, waterfront, or any other such sites for which you cannot or do not wish to show computations, or (b) make a gross value deduction for utility right of ways, and other similar property obstructions.

TYPE - enter the SITE TYPE code that best describes the reason for the land value or deduction.

- 1 SITE VALUE
- 2 IRREGULAR
- 3 RESIDUAL
- 4 WATERFRONT OR VIEW
- 5 NON-BUILDABLE

- 6 MINUS VALUE - to make a gross value land deduction. This code can only be used with other land entries and providing that the total amount to be deducted does not exceed the sum of all the other land entries.

AMOUNT - enter the value of the site or the amount of the desired deduction.

301-330 LAND CLASSIFICATION CODE

Required RES / COM S3&4

Enter the four numeric characters denoting the LAND CLASSIFICATION CODE for the property described on the land segment entry.

The CLASSIFICATION CODE is a coding system to identify the different types of taxable property that may be found within a parcel. This should not be confused with PROPERTY TYPE, which codes both land and improvements as one. The CLASSIFICATION CODE uniquely codes land and improvements as if each were a separate unit.

The CLASSIFICATION CODES will be automatically generated for Agricultural type land and need not be entered by the user.

The complete listing of PROPERTY CLASSIFICATION CODES can be found in the Appendix of the Property Administration Data Section.

331-336 AGRICULTURAL LAND TOTALS

Optional RES / COM S4

These six fields are the acreage totals of the various agricultural land type areas of the parcel; Continuously Cropped, Fallow, Irrigated, Grazing, Wild Hay, and Timber. The acreage that is to be entered in each field is the total of the land type area of the entire parcel.

These fields should only be entered on the first card of the parcel (CARD = 01). If the parcel has no agricultural land, leave these fields blank.

340 AGRICULTURAL IRRIGATION

Optional RES / COM S4

For agricultural land valuation purposes only, all other uses leave these fields blank.

LAND ROTATION - enter the code that describes the rate of crop rotation for the land.

- 1 MAXIMUM
- 2 MEDIUM
- 3 MINIMUM

WATER COST - enter the code that describes the cost per acre to irrigate the land.

Code	Water Cost
01	less than \$ 1.50
02	\$ 1.50 to \$ 2.49
03	\$ 2.50 to \$ 3.49
04	\$ 3.50 to \$ 4.49
05	\$ 4.50 to \$ 5.49
06	\$ 5.50 to \$ 6.49
07	\$ 6.50 to \$ 7.49
08	\$ 7.50 and greater

341 TIMBER RES / COM S4
Optional
For timber land valuation purposes only, all other uses leave these fields blank.

DISTANCE TO USABLE ROAD - (Timber R Code) - Enter the code that describes the amount of road which must be built into that section, in order, to harvest timber.

Code	Distance (Miles)	Code	Distance (Miles)
01	Present	16	13.1 - 14
02	.1 - .5	17	14.1 - 15
03	.6 - 1	18	15.1 - 16
04	1.1 - 2	19	16.1 - 17
05	2.1 - 3	20	17.1 - 18
06	3.1 - 4	21	18.1 - 19
07	4.1 - 5	22	19.1 - 20
08	5.1 - 6	23	20.1 - 21
09	6.1 - 7	24	21.1 - 22
10	7.1 - 8	25	22.1 - 23
11	8.1 - 9	26	23.1 - 24
12	9.1 - 10	27	24.1 - 25
13	10.1 - 11	28	25.1 - 26
14	11.1 - 12	29	26.1 - 27
15	12.1 - 13	30	Unproductive

TOPOGRAPHY - (Timber T Code) - Enter the code that best describes the topography of the section in which the timber is located.

- 1 0 - 20%
- 2 21 - 40%
- 3 41 - 60%
- 4 61 - 70%
- 5 Unproductive

DISTANCE TO MILL - (Timber D Code) - Enter the code that describes the distance to the nearest manufacturing point for the timber described in this entry.

Code	Distance (Miles)
1	0 - 20
2	21 - 40
3	41 - 60
4	61 - 80
5	81 - 100
6	101 - 120
7	121 - 140
8	141 - 160
9	161 - 180

400 TOPOGRAPHY RES / COM S2
Required
Refers to the topographical features of the subject property. At least one entry must be listed, however, any combination of two of the below codes may be entered.

- 1 LEVEL - to indicate the subject property is level to the access street.
- 2 ABOVE STREET - to indicate the subject property is above the access street.
- 3 BELOW STREET - to indicate the subject property is below the access street.
- 4 ROLLING - to indicate a gently undulating terrain.
- 5 STEEP - to indicate the property has excessive grade.
- 6 LOW - to indicate the property has a low terrain.
- 7 SWAMPY - to indicate wet spongy land, marsh, or bog.

PART 3: DATA COLLECTION

8 AG / TIMBER LAND - to indicate that the site is used for agricultural or timber purposes.

N NORTH EXPOSURE - to indicate that the view from the site is towards the north.

S SOUTH EXPOSURE - to indicate that the view from the site is towards the south.

E EAST EXPOSURE - to indicate that the view from the site is towards the east.

W WEST EXPOSURE - to indicate that the view from the site is towards the west.

410 UTILITIES RES / COM S2

Required

Refers to the services that are available to the property. These services can be either public or private. At least one entry must be listed, however, up to three codes may be entered. Enter the code(s) which are most representative of the subject property.

0 NONE - to indicate that no utilities are available to the property.

1 ALL PUBLIC - to indicate that all public utilities; including water, sewer, gas, and electric, are available to the property.

2 ALL UNDERGROUND - to indicate that all utilities available to the property are underground.

3 PUBLIC WATER - to indicate that public water is available to the property.

4 PUBLIC SEWER - to indicate that public sewer is available to the property.

5 COMMUNITY WATER - to indicate that community water is available to the property.

6 COMMUNITY SEWER - to indicate that community sewer is available to the property.

7 WELL - to indicate that the only water available to the property is from a private well.

8 SEPTIC - to indicate that only private sewer (septic tank) is available to the property.

9 GAS - to indicate that natural gas is available to the property.

420 ACCESS RES / COM S2

Required

Refers to the primary fronting street or the street providing the most immediate access to the subject property, and the features which exist at the property.

At least one entry must be listed; however, any combination of two of the below codes may be entered.

0 LANDLOCKED / NONE - to indicate a property without access to any type of street or road.

1 PAVED ROAD - to indicate a concrete, blacktop, or a comparably surfaced street or road.

2 SEMI-IMPROVED ROAD - to indicate a road or street of better quality than gravel but not paved.

3 DIRT ROAD - to indicate a gravel or comparably surfaced road or street.

4 PROPOSED ROAD - to indicate an access to the property via a road that has been platted or proposed but not constructed.

5 SEASONAL ACCESS - to indicate that the access to property is only seasonal, not year-round.

6 SIDEWALK - to indicate the presence of a paved sidewalk available for public use.

7 ALLEY - to indicate the presence of an alley available for public use.

8 RAILROAD - to indicate rail access to the property.

9 RIVER or WATERWAY - to indicate that there is river or other waterway access to the property.

430 FRONTING RES / COM S2**Required**

Refers to the type of primary fronting street and a descriptive feature of that street. Enter the code which is most representative of the subject property.

- 0 NONE - there is no access street for this property.
- 1 MAJOR STRIP or CENTRAL BUSINESS DISTRICT - to indicate a highly traveled major artery or a major artery located within the central business district.
- 2 SECONDARY ARTERY - to indicate a moderately to heavily traveled secondary artery or collector which can accommodate residential development along retail and commercial establishments.
- 3 SECONDARY STREET - to indicate a moderately traveled residential sub-collector which is designed to conduct traffic between residential streets or lanes and major arteries or collectors.
- 4 RESIDENTIAL STREET - to indicate a lightly traveled street whose primary purpose is to channel traffic to dwelling units and other streets.
- 5 RESIDENTIAL LANE - to indicate a lightly traveled short street or court designed to channel traffic to dwelling units.
- 6 CUL-DE-SAC - to indicate that the fronting street is a cul-de-sac or a street open at one end only, and has an enlarged turn around area at the closed end.
- 7 DEAD END - to indicate that the fronting street is open at one end only, and does not have an enlarged turn around area at the closed end.
- 8 FRONTAGE ROAD - to indicate a local street paralleling a limited access highway and built to service abutting properties and to gather and control vehicles entering or leaving the limited access highway.
- 9 PRIVATE ROAD - to indicate that the primary fronting street is a privately owned

road constructed to service the subject property.

440 LOCATION RES / COM S2**Required**

Refers to the type of neighborhood in which the subject property is located. In many instances, these boundaries have already been established or defined by city planners or other agencies. Enter the code which is most representative of the subject property.

- 0 RURAL LAND - to indicate that the subject property is in a rural part of the county.
- 1 CENTRAL BUSINESS DISTRICT - to indicate the core area in the center of the city in which is concentrated the major retail, financial, professional, and services activities of the city.
- 2 PERIMETER CENTRAL BUSINESS DISTRICT - to indicate the outer boundaries of the central business district or the core area in which the concentration of major mercantile activity is significantly less pronounced.
- 3 BUSINESS CLUSTER - to indicate a cluster or number of commercial properties grouped together due to some attracting force; such as a major intersection of interstate highways or a major shopping mall.
- 4 COMMERCIAL AREA - to indicate commercial development. This may include an almost continuous row or strip of retail stores and allied service establishments.
- 5 NEIGHBORHOOD or SPOT - to indicate:
 - dwellings located in primarily residential areas.
 - commercial properties or individual or scattered commercial establishments located in basically residential areas.
- 6 COMMERCIAL / INDUSTRIAL PARK - to indicate a controlled park-like development designed to accommodate specific light industries and mercantile properties and containing the required utilities, streets, and other appurtenances.

PART 3: DATA COLLECTION

- 7 **INDUSTRIAL SITE** - to indicate land or land improvements (not located in an established industrial park) adaptable for industrial use. Normally, this is a combination of land, improvements, and machinery intended for the assembling, processing, and manufacturing of products from raw materials or fabricated parts or for the production of natural resources.
- 8 **APARTMENT / CONDOMINIUM COMPLEX** - to indicate the property is an apartment or condominium complex site.
- 9 **GOLF COURSE** - to indicate that the subject property borders or is near a golf course. The proximity to the golf course is sufficient to affect the value of the property.

450 **PARKING** RES / COM S2 Optional

Refers to the type, quantity, and proximity of parking available to the subject property.

TYPE - Enter the code that describes the type of parking available to the subject property

- 0 **NONE** - to indicate that no parking is available.
- 1 **OFF STREET** - to indicate that off street parking is available.
- 2 **ON STREET** - to indicate that only on street parking is available.
- 3 **ON & OFF STREET** - to indicate that both on and off street parking facilities are available.
- 4 **PARKING GARAGE** - to indicate that the primary source of parking for the subject property is a parking garage or deck.

QUANTITY - Enter the code that describes the quantity of parking available to the subject property.

- 0 **NONE** - to indicate that no parking is available.
- 1 **MINIMUM** - to indicate that the quantity of parking available is minimal and inadequate to support the property.

- 2 **ADEQUATE** - to indicate that the quantity of parking available is sufficient and adequate to support the property.
- 3 **ABUNDANT** - to indicate that the quantity of parking available is more than sufficient to support the property.

PROXIMITY - Enter the code that describes the proximity of parking available to the subject property.

- 0 **FAR** - to indicate that no parking is available, or that the lack of proximity to available parking is a detriment to the income producing capabilities of the subject property.
- 1 **NEAR** - to indicate that the proximity of available parking is good enough to cause no detriment to the income producing capabilities of the subject property.
- 2 **ADJACENT** - to indicate that available parking is very close or bordering the subject property.
- 3 **ON-SITE** - to indicate that available parking is located on the subject parcel.

461-463 **APPRAISAL INSPECTION INFORMATION** RES / COM S1 Required

Space is provided to enter information regarding the three previous calls, visits, or reviews of the subject property. The data is arranged in vertical columns.

NOTE: The third entry is reserved for information regarding the Reappraisal.

DATE - Enter the number of the month, the day of the month, and the last two digits of the year when an update to the information described on this card was finished. Each position must be filled in. Use leading zeros if necessary.

TIME - Enter the time of day in hours and minutes that the inspection was made for this parcel.

IDENTIFICATION NUMBER - The Management Services Bureau will assign a permanent identification number for each person in the

Property Assessment Division. Each number will uniquely identify one person and will not be reissued if that person leaves the Department of Revenue. A new number will not be issued if the person transfers between bureaus or counties.

CODE - Enter the code that describes the type of contact that was made and the current status of the parcel.

- 0 VACANT or OBY ONLY - to indicate that the parcel is vacant or only contains auxiliary improvements, and no responsible occupants are available.
- 1 INTERNAL REVIEW - to indicate that an internal inspection and interview on the parcel were accomplished.
- 2 EXTERNAL REVIEW - to indicate that there was no interview, but an external review of the parcel was made.
- 3 REFUSED ENTRY - to indicate that both an interview and measurements on the parcel were refused.
- 4 INFORMATION ESTIMATED - to indicate that information collected was estimated because access to the property was prohibited for some reason.
- 5 DOOR HANGER / PRE-MAILER LEFT - to indicate that a door hanger or pre-mailer was left at the property.
- 6 DOOR HANGER / PRE-MAILER RETURNED - to indicate that a door hanger or pre-mailer was returned from the property owner or some other responsible party.
- 7 DATA FROM PRC - to indicate that information for this property was collected from the previous Property Record Card.
- 8 NEW CONSTRUCTION - to indicate that this parcel is new construction.
- 9 REAPPRAISAL WORK COMPLETED - to indicate that all work required for the reappraisal has been completed.

NOTE: Code 9 may only be entered in the last position of field 463.

464 PERSON CONTACTED RES / COM S1

Optional

NAME - Enter the name of the responsible person contacted, either in person or by phone.

CODE - Enter the code that describes the person contacted.

- | | |
|----------|-----------|
| 1 OWNER | 4 BUILDER |
| 2 TENANT | 5 MANAGER |
| 3 AGENT | 6 OTHER |

-

468 CONTINUED REVIEW NEEDED

Optional

RES / COM S1

If the value placed on the land or any principal building on the parcel is one that is not reconcilable with the apparent data, or if there are conditions pertaining to improvements that need special consideration and review, select from the following list the code that most appropriately denotes the condition to be reviewed and enter it in the position provided. If no such condition exists, or no review is needed, leave all positions blank.

DATE - This date is a date in the future on which a reminder is to be printed for the reason selected below. Enter the number of the month, day of the month, and the last two digits of the year. Each position must be filled in. Use leading zeros if necessary.

CODE - Enter the code that best describes the reason that this parcel must be reviewed at a later date.

Code	Description
0	No review needed.
1	Construction of a new principal building is incomplete.
2	Construction of new accessory improvements is incomplete.
3	Major remodeling of a principal building is in process.
4	Incremental valuation increase due to remodeling.
5	Ten year tax incentive - energy generation.
6	Property is tax exempt.
7	Mobile Home - personal.
8	Mobile Home - realty.
9	The appraisal was based on estimated conditions.

PART 3: DATA COLLECTION

Code	Description
------	-------------

- | | |
|----|--|
| 10 | This parcel is non-residential, but has a residential structure on it. |
| 11 | Agricultural classification review. |
| 12 | Electrical/Building permit review. |
| 13 | Periodic flooding, percolation problems, or other water problems exist. |
| 14 | The name of the parcel owner is not known. It cannot be discovered from the tax roll, mining claim books, or property record card. |
| 15 | Review for land improvements (landfill or excavation). |
| 16 | Mining claim review. |
| 17 | Natural disaster review. |
| 18 | Timber classification review. |
| 19 | Incomplete or invalid Realty Transfer Certificate Information. |
| 20 | Pending appeal board or court decision. |
| 21 | AB-26 review. |
| 22 | Other (see notes). |
| 23 | To be assigned later. |
| 24 | Orchard |
| 25 | Tree Farm |

471-472 BUILDING / ELECTRICAL PERMIT RECORD RES / COM S1
Optional

Space is provided to enter the data for two entries of building and/or electrical permit information. The data is arranged in vertical columns. The data should be listed from top to bottom, allowing one line for each permit.

PERMIT NUMBER - Enter the number of the permit, right justified.

DATE - Enter the number of the month, day of the month, and the last two digits of the year of the permit. Each position must be filled in. Use leading zeros if necessary.

AMOUNT - Enter the value of the permit. Right justify the entry, it is not necessary to fill in each position.

CODE - Enter the code denoting the status of the permit.

- O OPEN - to indicate that the permit is still open and may need to be inspected for completion of the new construction.

- C CLOSED - to indicate that the improvement has been finalized and has been picked up for new construction.

PURPOSE - Enter the reason or purpose that the permit was issued.

481-483 NOTES RES / COM S2
Optional
Notes should be short and to the point. Space is provided to enter three different NOTES for each property.

NOTE CODE - Enter the code that best describes the reason for this note. This code will permit computer extraction and sorting of the notes to aid in field work and review.

Code	Description
------	-------------

- | | |
|----|---|
| AS | Adjusted sales price. |
| BD | Dog denies access. |
| CF | Owner expects a call before entering property boundary. |
| FA | Flat add cost. |
| FD | Access by four-wheel drive only. |
| LG | Locked gate. |
| MC | Mining Claim |
| OD | Owner denies access to property. |
| OS | Owner should be contacted at another site. |
| SO | There is a second owner for this parcel. |
| SP | Seasonal passage, access may be limited. |
| SR | Sanitary restrictions not lifted. |
| SS | Structure style not listed in standard style codes. |
| SU | Seasonal use or vacant parcel. |

EXPLANATION - Enter what additional descriptive information is necessary that will further clarify the reason for this note.

885 APPEAL ADJUSTMENT: LAND RES S9 & COM S10
Optional

Non-agricultural land appeals adjustment decisions are coded in this field. A "+" or "-" must be coded in the left hand position to indicate whether the adjustment is an increase or a decrease to the land value.

The computer will automatically adjust the non-agricultural Base Land Value(s) in the Land & Improvements Value column based upon the entry in this field. If there is only one non-agricultural land entry, the APPEAL ADJUSTMENT: LAND will be added to or subtracted from the calculated Base Land Value. If there are more than one non-agricultural land entries, the APPEAL ADJUSTMENT: LAND amount will be apportioned across the multiple entries on a prorata basis.

886 APPEAL ADJUSTMENT: MAIN BUILDING
Optional RES S9 & COM S10
Improvement appeals adjustment decisions are coded in this field. A "+" or "-" must be coded in the left hand position to indicate whether the adjustment is an increase or a decrease to the principal building value.

The computer will automatically adjust the Base Improvement Value in the Land & Improvements Value column based upon the entry in this field. The APPEAL ADJUSTMENT: MAIN BUILDING and the APPEAL ADJUSTMENT: ACCESSORY BUILDING amounts will be added together and then the total will be added to or subtracted from the calculated Base Improvement Value.

887 APPEAL ADJUSTMENT: ACCESSORY BUILDING
Optional RES S9 & COM S10
Accessory improvement appeals adjustment decisions are coded in this field. A "+" or "-" must be coded in the left hand position to indicate whether the adjustment is an increase or a decrease to the accessory improvement value.

The computer will automatically adjust the Base Improvement Value in the Land & Improvements Value column based upon the entry in this field. The APPEAL ADJUSTMENT: MAIN BUILDING and the APPEAL ADJUSTMENT: ACCESSORY BUILDING amounts will be added together and then the total will be added to or subtracted from the calculated Base Improvement Value.

888 APPEAL ADJUSTMENT: FLAT VALUE
Optional RES S9 & COM S10
Properties which are assigned a flat property value by the County or State Tax Appeal Board are coded in this field. The Appeal Board has stated

one value for the entire property and has not specified what the individual values are to be for the non-agricultural land, principal buildings or accessory structure components.

The property flat value is an eight digit positive value. Leading zeros must be coded. Please note that there is no "+" or "-" sign coded for this item. The value is always considered to be positive ("+"). The computer will automatically adjust both the Base Land Value and the Base Improvement Value in the Land & Improvements Value column based upon the entry in this field. The APPEAL ADJUSTMENT: FLAT VALUE amount will be added to the calculated Base Improvement Value and Base Land Value(s) on a prorated basis.

891-897 OVERRIDE CODE & VALUE
Optional RES S9 & COM S10
Enter the OVERRIDE CLASS CODES and the corresponding VALUES, if the Value(s) or Class Code(s) of the record, as generated by the computer, and displayed in the Land & Improvements Value column must be adjusted.

Override adjustments may be due to the granting of exemptions and/or reductions. Overrides will typically be entered for records that qualify for changes due to an exemption or appeal decision.

Up to seven OVERRIDE CLASS CODES and VALUES may be entered for each CAMA record. *If the user adjusts one value or class code, all other class codes and values must be manually entered.* The Total of the Override Values must equal the Total of the Land & Improvement values.

The complete listing of PROPERTY CLASS CODES can be found in the Appendix of Property Administration Section of the Data Collection Manual.

960 FINAL BASE VALUE RES S9 & COM S10
Required
VALUE - The total FINAL BASE VALUE, both land and improvements, to be assigned to the parcel is to be entered in this field. The breakdown by Classification Code is displayed in the Land & Improvements Value column. The computer will automatically move either the calculated cost, market or income value to this field (see REASON for rules governing computer generating values). If the computer generated

PART 3: DATA COLLECTION

value is to be changed or overridden, enter the VALUE, REASON, DATE, and REVIEWER.

REASON - Enter the code that describes the methodology that was used to produce the FINAL BASE VALUE of the record. If the VALUE is produced by the computer, the corresponding REASON code will be automatically entered by the computer.

Code	Description
------	-------------

- | | |
|---|--|
| 0 | Computer produced cost value, this value will be overlaid with market value or income value, if produced. |
| 1 | Residential: Computer produced market/comparable sales value.
Commercial: Computer produced income value. |
| 2 | Recalculate a computer produced market/comparable sales value. |
| 3 | Computer produced cost value, this value will not be overlaid with either market or income values. |
| 4 | User defined |
| 5 | User defined |
| 6 | User defined |
| 7 | User defined |
| 8 | User defined |
| 9 | Prior cycle value entered from the conversion of CAAS to MAS. |

DATE - Enter the date; month, day, and year, of the day on which the FINAL BASE VALUE was entered. If the VALUE is produced by the computer, the DATE will be automatically entered by the computer.

REVIEWER - Enter the Identification Number of the person that assigned the FINAL BASE VALUE to the record. If the VALUE is produced by the computer, the corresponding REVIEWER code will be automatically entered by the computer.

A32.1. COUNTY NUMBERS

<u>COUNTY</u>	<u>NO</u>	<u>COUNTY</u>	<u>NO</u>	<u>COUNTY</u>	<u>NO</u>
Beaverhead	18	Jefferson	51	Roosevelt	17
Big Horn	22	Judith Basin	36	Rosebud	29
Blaine	24	Lake	15	Sanders	35
Broadwater	43	Lewis & Clark	05	Sheridan	34
Carbon	10	Liberty	48	Silver Bow	01
Carter	42	Lincoln	56	Stillwater	32
Cascade	02	Madison	25	Sweet Grass	40
Chouteau	19	McCone	41	Teton	31
Custer	14	Meagher	47	Toole	21
Daniels	37	Mineral	54	Treasure	33
Dawson	16	Missoula	04	Valley	20
Deer Lodge	30	Musselshell	23	Wheatland	44
Fallon	39	Park	49	Wibaux	52
Fergus	08	Petroleum	55	Yellowstone	03
Flathead	07	Phillips	11	Yellowstone National Park	57
Gallatin	06	Pondera	26		
Garfield	50	Powder River	09		
Glacier	38	Powell	28		
Golden Valley	53	Prairie	45		
Granite	46	Ravalli	13		
Hill	12	Richland	27		

A32.2. STANDARD ABBREVIATIONS FOR STREET ADDRESSES

Addition	ADD	Motorway	MTWY
Alley	AL	Municipality	MUN
Arcade	ARC	North	N
Avenue or Avenida	AV	Oval	OVAL
Boulevard	BLVD	Overpass	OVPS
Branch	BR	Park	PARK
Bridge	BRIG	Parkway	PKWY
Bypass	BYP	Pass	PASS
Calle	C	Path	PATH
Causeway	CSWY	Pike	PKE
Center	CTR	Place	PL
Church	CHR	Plaza	PLZ
Circle	CIR	Point	PT
Common	COM	Ramp	RAMP
Court	CT	Road	RD
Cove	COVE	Route	RTE
Crescent	CRES	Row	ROW
Crossing	CRSG	Rue	RUE
Drive	DR	Skyway	SKWY
East	E	South	S
Expressway	EXWY	Square	SQ
Foot	FT	Square Foot	SQFT
Freeway	FRWY	Street	ST
Front Foot	FF	Subdivision	SUB
Gardens	GDNS	Suite	STE
Highway	HWY	Terrace	TER
Improvement	IMP	Throughway	THWY
Improvements	IMPS	Trafficway	TFWY
Inches	IN	Trail	TRL
Lane	LA	Tunnel	TUN
Loop	LOOP	Turnpike	TPKE
Mall	MALL	Underpass	UNP
Manor	MNR	Walk	WALK
Mews	MEWS	Wall	WALL
		Way	WY
		West	W

A32.3. PARCEL SIZING PROCEDURES

The majority of parcels are shaped in a way which readily lends them to the application of standard front foot sizing procedures and techniques. This Appendix contains an explanation of those procedures. Standardized procedures are essential to maintaining uniformity in land valuations. The appraiser must at all times exercise sound judgment in determining whether or not the procedures are applicable, using them only if they calculate accurate, equitable land valuations.

A32.3.1. PARCEL SIZING PRINCIPLES

The most important rule of lot sizing is that the established frontage and depth must form right angles.

The Depth lines must be parallel to each other and the Width (Frontage) line perpendicular to the Depth lines.

Prior to establishing the size of a lot, the scale of the plat must be established.

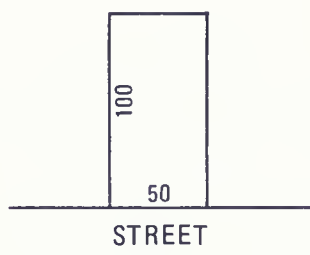


Figure 1.

Figure 1 shows a 100% lot: the vertical lines form right angles with the horizontal lines. There are not any lines in this lot that do not form a 90 degree angle.

The Lot size would be shown as:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
1	50	100

Note the placement of the lot to the street. In the majority of situations, the narrowest portion of the lot is the width. Only if this lot were a corner lot would the possibility exist for the frontage to be 100. The position of the house should be considered in a corner lot situation.

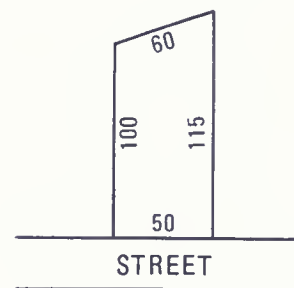


Figure 2.

The Lot in Figure 2 is similar to the previous example. Note that the 60' back lot line is not perpendicular to the depth lines. However, the 50' front lot line is. The Depth lines form right angles with the frontage, but vary in length. To establish the depth, these must be averaged. $100 + 115 = 215$. 215 divided by 2 equals 107.5. (0.5 or more is rounded up).

The Lot size would be shown as:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
1	50	108

The Lot in Figure 3 is another example of average depth lot. The frontage is the line which is perpendicular to the depth lines. In this example, the frontage is 70'. In many situations, additional lines will need to be drawn to establish an accurate depth. By using only the 100' line as the depth, you would be totally disregarding the rear portion of the lot. Therefore, an additional depth line must be drawn (the dotted line perpendicular to the frontage). Any lines drawn to establish depth must be perpendicular to the frontage line. Also, this line or lines must be of equal increments within the parallel depth lines.

PART 3: DATA COLLECTION

The lines drawn to establish depth will have to be measured to scale for computation. The total of all depth lines is averaged for the effective depth:

$$100' + 140' + 100' = 340 \text{ divided by } 3 = 113.33$$

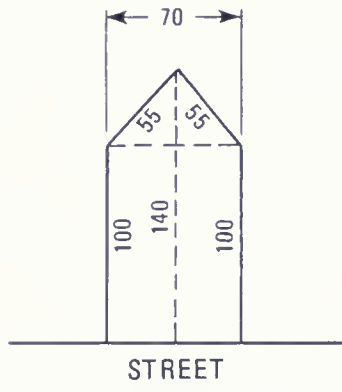


Figure 3.

The Lot size would be shown as:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
3	70	113

The example in Figure 4 is very similar to the previous one. Again, additional depth lines must be drawn perpendicular to the frontage in equal increments and measured to scale. Once measured, they can be added and averaged as shown here:

$$70' + 75' + 90' + 100' + 90' = 425$$

$$425 \text{ divided by } 5 = 85' \text{ average depth}$$

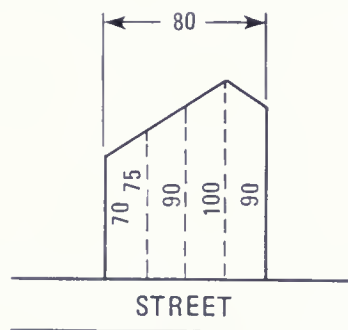


Figure 4.

The entries for Figure 4 would be:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
3	80	85

All previous examples have had at least three of the frontage and depth lines perpendicular and parallel. In the Figure 5 example, a right triangle, there are only two perpendicular lines. When any Lot or portion of a Lot forms a right triangle, enter the Lot type that represents the triangular lot, the width and the depth. (The width is the line that runs parallel to the street, whether or not it actually borders the street.)

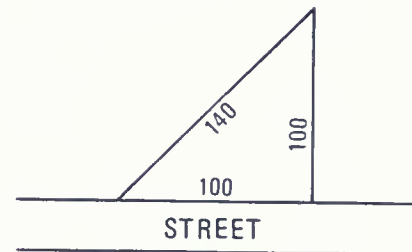


Figure 5.

If the base of the triangle is on the street (Figure 5), use Front Foot type (7) triangle back apex. If the apex of the triangle is on the street (Figure 6), use Front Foot type (6) triangle front apex.

The depth is the line that is perpendicular to the width and in this example equals 100. The Lot size in Figure 5 would be shown as follows:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
7	100	100

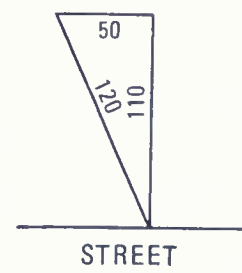


Figure 6.

The Lot size in Figure 6 would be:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
6	50	110

In example Figure 7, the width lines are parallel, but the lines used to determine the depth are neither parallel to one another, nor perpendicular to the frontage line. Depth lines must be drawn and measured to scale. After the depth lines (dotted lines) are drawn, you will notice that within this Lot there are three individual lots. There are two back apex triangles and one regular Lot. The frontage is calculated as follows:

140	Gross Width - the widest portion of the lot which will form right angles with the drawn depth lines.
- 60	Regular Lot Width
80	The width of both back apex triangular lots would be 40' each (80 divided by 2).

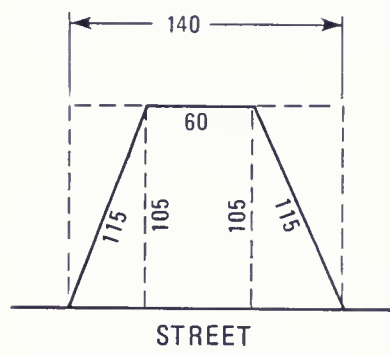


Figure 7.

This lot would require 3 Front Foot entries:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
1	60	105
7	40	105
7	40	105

The Figure 8 example is just the reverse of the previous example. It is calculated in the same method, but Front Foot type (6), triangle front apex, is used because the apex of the triangles are on the street. Note: Depth is measured to scale along perpendicular lines.

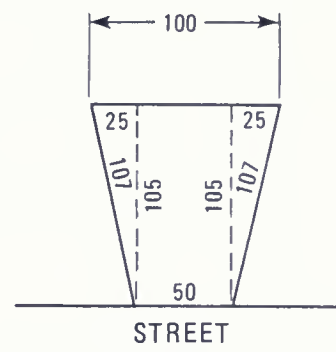


Figure 8.

The Front Foot entries for Figure 8 would be:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
1	50	105
6	25	105
6	25	105

The lot shown in Figure 9 is referred to as a double entry lot. The lines are all perpendicular and parallel. However, two distinct lots can be formed for this one lot (note dotted line). This lot will have two frontages and two depths.

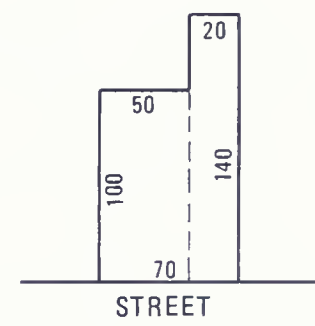


Figure 9.

The Land size for Figure 9 would be:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
1	50	100
1	20	140

PART 3: DATA COLLECTION

Lot No. 2 in Figure 10 is also a double entry lot. However, it differs from the previous example because the 50 x 50 portion of the lot at the rear has no street frontage. This is called a back lot and must be coded as such. This back lot has considerably less utility value and compensation must be made. An adjustment must be applied to show a lesser value than a lot having direct street access.

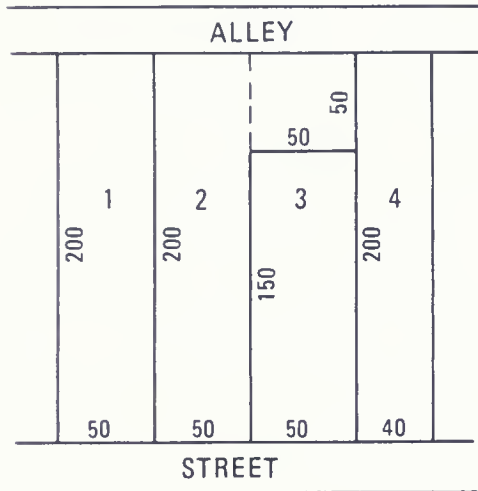


Figure 10.

NOTE: Back lots require careful consideration in order to predict the interaction of standard frontage and excess frontage calculations on the total lot value.

The Lot size would be shown as follows:

FRONT FOOT TYPE	WIDTH (FRONTAGE)	DEPTH
1*	100	200
2*	50	150

* A back lot entry must be used with a regular lot entry. The back lot entry subtracts the value of that portion of the regular lot entry that is not actually part of that lot. *Back lot entries are always minus values.*

Lots that are very irregular in shape, like the examples of Figures 11 and 12, would be better valued using the square foot lot entries.

The lot in Figure 11 does not have any two lines perpendicular or parallel.

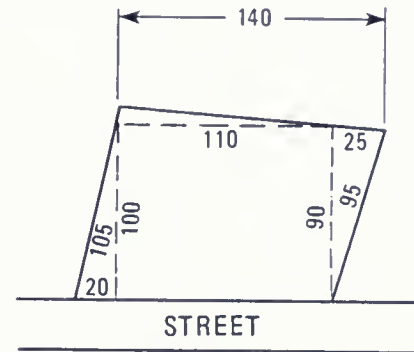


Figure 11.

The type of lot shown in Figure 12 is usually found on a cul-de-sac.

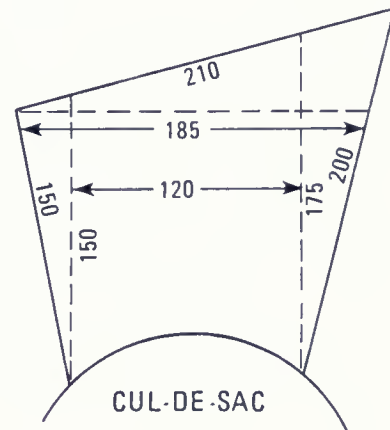
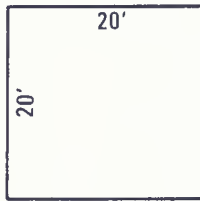


Figure 12.

A32.4. PARCEL SQUARE FOOTAGE FORMULAS

1. Square

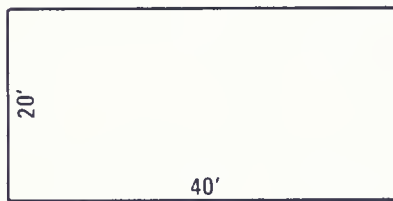


$$\text{AREA} = \text{BASE} \times \text{HEIGHT}$$

Example:

$$\text{Area} = 20' \times 20' = 400 \text{ sq. ft.}$$

2. Rectangle

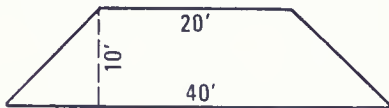


$$\text{AREA} = \text{BASE} \times \text{HEIGHT}$$

Example:

$$\text{Area} = 40' \times 20' = 800 \text{ sq. ft.}$$

3. Trapezoid

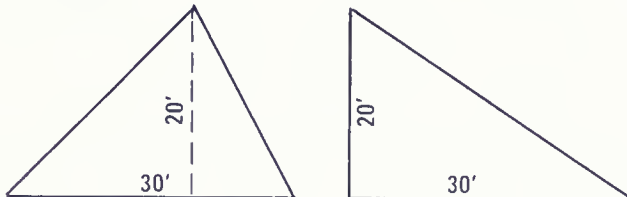


$$\text{AREA} = \frac{\text{HEIGHT} \times (\text{SUM OF 2 BASES})}{2}$$

Example:

$$\text{Area} = \frac{10' \times (20' + 40')}{2} = 300 \text{ sq.ft.}$$

4. Triangle

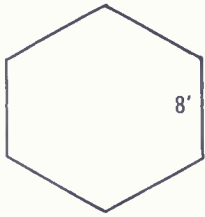


$$\text{AREA} = \frac{\text{HEIGHT} \times \text{BASE}}{2}$$

Example:

$$\text{Area} = \frac{20' \times 30'}{2} = 300 \text{ sq.ft.}$$

5. Regular Polygon



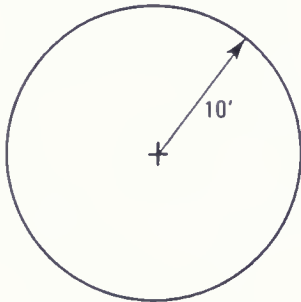
$$\text{AREA} = \text{CONSTANT} \times \text{SIDE SQUARED}$$

Area:

5 sides	=	1.7205 x Side Squared
6 sides	=	2.5981 x Side Squared
7 sides	=	3.6339 x Side Squared
8 sides	=	4.8284 x Side Squared
9 sides	=	6.1818 x Side Squared
10 sides	=	7.6942 x Side Squared
11 sides	=	9.3656 x Side Squared
12 sides	=	11.1962 x Side Squared

$$\text{Example: } 2.5981 \times (8 \times 8) = 166 \text{ sq.ft.}$$

6. Circle



$$\text{AREA} = \text{Pi} \times (\text{RADIUS SQUARED})$$

Example:

$$\text{Area} = 3.1416 \times (10 \times 10) = 314 \text{ sq. ft.}$$

A32.5. LOT DEPTH VALUATION FACTORS

A32.5.1. PARCEL DEPTH VALUATION CALCULATIONS

These tables are to be used as guides for calculating values for lots that are either shorter or longer than the standard lot depth in the area.

Standard lot depths are shown across the top of the tables above the solid line. The left-hand column shows various actual depths that may exist.

Select the actual depth of the lot and follow across to the proper standard lot depth for the area being appraised. The figure encountered is the percentage factor to be applied to the front foot value of the lot. The modified front foot value is then multiplied by the width of the lot.

This is essentially one large table giving depth factors for lots from 10 to 200 feet deep and standard depths ranging from 100 to 160 feet. The numbers are to be regarded as percentages.

The front foot depth factor is equal to the square root of the ratio of the actual depth to the standard depth.

$$\sqrt{\frac{\text{Actual Depth}}{\text{Standard Depth}}}$$

For example: a 90 foot deep lot where the standard depth is 100 feet gives a depth factor:

$$\sqrt{90/100} = \sqrt{0.90} = 95\%$$

A32.5.2. DEPTH FACTOR TABLES

LOT DEPTH VALUATION FACTORS

ACTUAL DEPTH	STANDARD DEPTH											
	100	110	115	120	125	130	135	140	145	150	155	160
10	32	30	29	29	28	28	27	27	26	26	25	25
12	35	33	32	32	31	30	30	29	29	28	28	27
14	37	36	35	34	33	33	32	32	31	31	30	30
16	40	38	37	37	36	35	34	34	33	33	32	32
18	42	40	40	39	38	37	37	36	35	35	34	34
20	45	43	42	41	40	39	38	38	37	37	36	35
22	47	45	44	43	42	41	40	40	39	38	38	37
24	49	47	46	45	44	43	42	41	41	40	39	39
26	51	49	48	47	46	45	44	43	42	42	41	40
28	53	50	49	48	47	46	46	45	44	43	43	42
30	55	52	51	50	49	48	47	46	45	45	44	43
32	57	54	53	52	51	50	49	48	47	46	45	45
34	58	56	54	53	52	51	50	49	48	48	47	46
36	60	57	56	55	54	53	52	51	50	49	48	47
38	62	59	57	56	55	54	53	52	51	50	50	49
40	63	60	59	58	57	55	54	53	53	52	51	50
42	65	62	60	59	58	57	56	55	54	53	52	51
44	66	63	62	61	59	58	57	56	55	54	53	52
46	68	65	63	62	61	59	58	57	56	55	54	54
48	69	66	65	63	62	61	60	59	58	57	56	55

LOT DEPTH VALUATION FACTORS (Cont'd)

ACTUAL DEPTH	STANDARD DEPTH											
	100	110	115	120	125	130	135	140	145	150	155	160
50	71	67	66	65	63	62	61	60	59	58	57	56
52	72	69	67	66	64	63	62	61	60	59	58	57
54	73	70	69	67	66	64	63	62	61	60	59	58
56	75	71	70	68	67	66	64	63	62	61	60	59
58	76	73	71	70	68	67	66	64	63	62	61	60
60	77	74	72	71	69	68	67	65	64	63	62	61
62	79	75	73	72	70	69	68	67	65	64	63	62
64	80	76	75	73	72	70	69	68	66	65	64	63
66	81	77	76	74	73	71	70	69	67	66	65	64
68	82	79	77	75	74	72	71	70	68	67	66	65
70	84	80	78	76	75	73	72	71	69	68	67	66
72	85	81	79	77	76	74	73	72	70	69	68	67
74	86	82	80	79	77	75	74	73	71	70	69	68
76	87	83	81	80	78	76	75	74	72	71	70	69
78	88	84	82	81	79	77	76	75	73	72	71	70
80	89	85	83	82	80	78	77	76	74	73	72	71
82	91	86	84	83	81	79	78	77	75	74	73	72
84	92	87	85	84	82	80	79	77	76	75	74	72
86	93	88	86	85	83	81	80	78	77	76	74	73
88	94	89	87	86	84	82	81	79	78	77	75	74
90	95	90	88	87	85	83	82	80	79	77	76	75
92	96	91	89	88	86	84	83	81	80	78	77	76
94	97	92	90	89	87	85	83	82	81	79	78	77
96	98	93	91	89	88	86	84	83	81	80	79	77
98	99	94	92	90	89	87	85	84	82	81	80	78
100	100	95	93	91	89	88	86	85	83	82	80	79
102	101	96	94	92	90	89	87	85	84	82	81	80
104	102	97	95	93	91	89	88	86	85	83	82	81
106	103	98	96	94	92	90	89	87	86	84	83	81
108	104	99	97	95	93	91	89	88	86	85	83	82
110	105	100	98	96	94	92	90	89	87	86	84	83
112	106	101	99	97	95	93	91	89	88	86	85	84
114	107	102	100	97	95	94	92	90	89	87	86	84
116	108	103	100	98	96	94	93	91	89	88	87	85
118	109	104	101	99	97	95	93	92	90	89	87	86
120	110	104	102	100	98	96	94	93	91	89	88	87
122	110	105	103	101	99	97	95	93	92	90	89	87
124	111	106	104	102	100	98	96	94	92	91	89	88
126	112	107	105	102	100	98	97	95	93	92	90	89
128	113	108	106	103	101	99	97	96	94	92	91	89

LOT DEPTH VALUATION FACTORS (Cont'd)

ACTUAL DEPTH	STANDARD DEPTH											
	100	110	115	120	125	130	135	140	145	150	155	160
130	114	109	106	104	102	100	98	96	95	93	92	90
132	115	110	107	105	103	101	99	97	95	94	92	91
134	116	110	108	106	104	102	100	98	96	95	93	92
136	117	111	109	106	104	102	100	99	97	95	94	92
138	117	112	110	107	105	103	101	99	98	96	94	93
140	118	113	110	108	106	104	102	100	98	97	95	94
142	119	114	111	109	107	105	103	101	99	97	96	94
144	120	114	112	110	107	105	103	101	100	98	96	95
146	121	115	113	110	108	106	104	102	100	99	97	96
148	122	116	113	111	109	107	105	103	101	99	98	96
150	122	117	114	112	110	107	105	104	102	100	98	97
152	123	118	115	113	110	108	106	104	102	101	99	97
154	124	118	116	113	111	109	107	105	103	101	100	98
156	125	119	116	114	112	110	107	106	104	102	100	99
158	126	120	117	115	112	110	108	106	104	103	101	99
160	126	121	118	115	113	111	109	107	105	103	102	100
162	127	121	119	116	114	112	110	108	106	104	102	101
164	128	122	119	117	115	112	110	108	106	105	103	101
166	129	123	120	118	115	113	111	109	107	105	103	102
168	130	124	121	118	116	114	112	110	108	106	104	102
170	130	124	122	119	117	114	112	110	108	106	105	103
172	131	125	122	120	117	115	113	111	109	107	105	104
174	132	126	123	120	118	116	114	111	110	108	106	104
176	133	126	124	121	119	116	114	112	110	108	107	105
178	133	127	124	122	119	117	115	113	111	109	107	105
180	134	128	125	122	120	118	115	113	111	110	108	106
182	135	129	126	123	121	118	116	114	112	110	108	107
184	136	129	126	124	121	119	117	115	113	111	109	107
186	136	130	127	124	122	120	117	115	113	111	110	108
188	137	131	128	125	123	120	118	116	114	112	110	108
190	138	131	129	126	123	121	119	116	114	113	111	109
192	139	132	129	126	124	122	119	117	115	113	111	110
194	139	133	130	127	125	122	120	118	116	114	112	110
196	140	133	131	128	125	123	120	118	116	114	112	111
198	141	134	131	128	126	123	121	119	117	115	113	111
200	141	135	132	129	126	124	122	120	117	115	114	112

PART 3: DATA COLLECTION

A32.6. DIVISION OF A SECTION OF LAND

1 SECTION = 1 SQ. MILE - 640 ACRES
 1 MILE = 8 FURLONGS
 320 RDS. = 5280 FT.

1 LINK = 7.92 inches
 1 FOOT = 12 inches

1 YARD = 36 inches
 = 3 feet

1 ROD or POLE = 16.5 feet
 = 5.5 yards
 = 25 links

1 CHAIN = 66 feet
 = 100 links
 = 4 rods

1 FURLONG = 40 rods
 = 660 feet

1 MILE = 5280 feet
 = 320 rods
 = 80 chains
 = 8 furlongs

1 SQUARE FOOT = 144 sq. inches
 1 SQUARE YARD = 9 sq. feet

1 SQUARE ROD = 272.25 sq. feet
 = 30.25 sq. yards

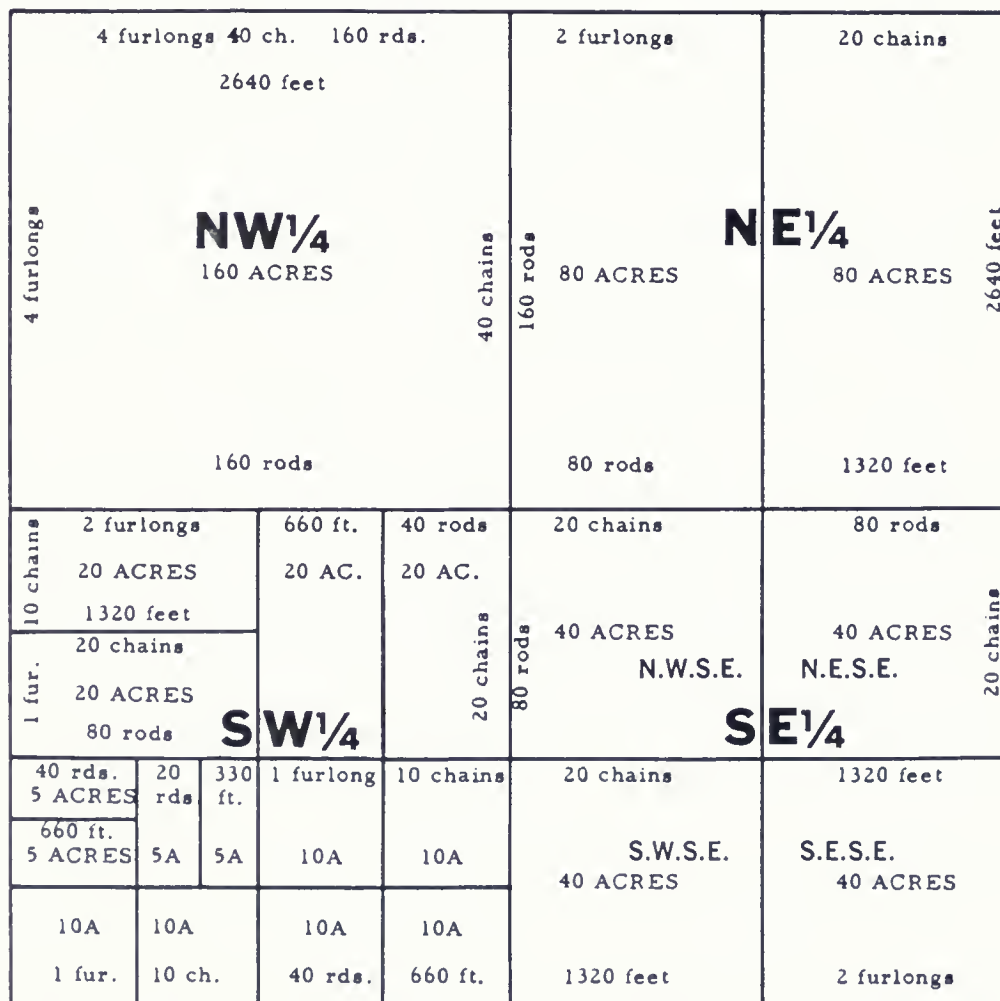
1 ACRE = 43560 sq. feet
 = 160 sq. rods
 = 10 sq. chains

1 ACRE is about 208.75 feet square or 8 rods wide by 20 rods long or any two numbers of rods whose product is 160 (25 x 125 ft.) = .0717 of an acre.

1 SQUARE MILE or 1 SECTION = 640 acres

1 TOWNSHIP = 36 sq. miles
 or 36 sections

1 TOWNSHIP = 6 MILES SQ.



A32.7. AGRICULTURAL LAND PRODUCTIVITY GRADE SCHEDULES

NON-IRRIGATED FARM LAND
 (PROPERTY CLASS CODE 1401)

<u>GRADE</u>	<u>BUSHEL OF WHEAT PER ACRE ON SUMMER FALLOW</u>
1A8	40 & Over
1A7	38 - 39
1A6	36 - 37
1A5	34 - 35
1A4	32 - 33
1A3	30 - 31
1A2	28 - 29
1A1	26 - 27
1A	24 - 25
1B	22 - 23
2A	20 - 21
2B	18 - 19
2C	16 - 17
3A	14 - 15
3B	12 - 13
4A	10 - 11
4B	8 - 9
5	Under 8

GRAZING LAND
 (PROPERTY CLASS CODE 1601)

<u>GRADE</u>	<u>ACRES PER 1000# STEER 10 MOS.</u>
1A2	Under 3
1A1	3 - 5
1A+	5.1 - 5.9
1A	6 - 10
1B	11 - 18
2A	19 - 21
2B	22 - 27
3	28 - 37
4	38 - 55
5	56 - 99
6	100 or over

WILD HAY LAND
 (PROPERTY CLASS CODE 1801)

<u>GRADE</u>	<u>TONS OF HAY PER ACRE</u>
1	3.0 & over
2	2.5 - 2.9
3	2.0 - 2.4
4	1.5 - 1.9
5	1.0 - 1.4
6	.5 - .9
7	Less than .5

**NON-IRRIGATED CONTINUOUSLY CROPPED
FARM LAND**
 (PROPERTY CLASS CODE 1501)

<u>GRADE</u>	<u>BUSHEL OF WHEAT PER ACRE EACH YEAR</u>
1A4	44 & over
1A3	42 - 43
1A2	40 - 41
1A1	38 - 39
1A	36 - 37
1	34 - 35
2	32 - 33
3	30 - 31
4	28 - 29
5	26 - 27
6	24 - 25
7	22 - 23
8	20 - 21
9	18 - 19
10	16 - 17
11	14 - 15
12	12 - 13
13	10 - 11
14	Less than 10

TILLABLE IRRIGATED LANDS
 (PROPERTY CLASS CODE 1101)

The assessed value of Tillable Irrigated Land is adjusted by the number of crop rotations per year and the cost of water.

<u>GRADE</u>	<u>TONS ALFALFA PER ACRE</u>
1A	4.5 or greater
1B	4.0 - 4.4
2	3.5 - 3.9
3	3.0 - 3.4
4	2.5 - 2.9
5	2.0 - 2.4
6	1.5 - 1.9
7	1.0 - 1.4
8	less than 1.0

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

TABLE OF CONTENTS

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
499	DELETE: RESIDENTIAL BUILDING	1	562	CONDOMINIUM AMENITIES	10
500	RESIDENTIAL IMPROVEMENT INDICATOR	1	566	MOBILE HOME	11
505	STORY HEIGHT	3	567	MOBILE HOME SERIAL / TITLE NUMBER	11
506	EXTERIOR WALLS	3	568	MOBILE HOME DIMENSION	11
507	STYLE	3	570	AGE	11
508	ROOF	5	571	DEPRECIATION	12
515	FOUNDATION	6	572	PHYSICAL CONDITION	13
520	BASEMENT	6	573	GRADE	13
521	FINISHED BASEMENT	6	574	COST AND DESIGN FACTOR	14
525	HEATING & COOLING	7	575	FLAT ADD COSTS	14
528	HEATED FLOOR AREA	8	576	CDU	14
530	LIVING ACCOMMODATIONS	8	577	PERCENT COMPLETE	15
535	PLUMBING	8	581	FLOOR AREAS BY LEVEL	15
540	ATTIC	9	582	UNFINISHED FLOOR AREAS BY LEVEL	15
545	GARAGE STALLS	9	599	DELETE: ADDITIONS	16
550	MASONRY FIREPLACE	9	601-608	ADDITIONS	16
551	PREFAB FIREPLACE AND STOVE	10	699	DELETE: OBY	18
557-558	MISCELLANEOUS OTHER FEATURES	10	701-706	OTHER BUILDING & YARD IMPROVEMENTS	18
560	CONDOMINIUM LEVEL	10	711	MISCELLANEOUS IMPROVEMENTS	21
561	CONDOMINIUM UNIT TYPE	10	800	TOTAL OTHER IMPROVEMENTS	21

CONTENT OF DATA FIELDS

All of the data specifically for Residential and Agricultural improvements is contained in four screens. The following list shows the fields in numerical order and describes the data requirements for them. It also shows the number of the screen that contains the field.

499 DELETE: RESIDENTIAL BUILDING Optional RES GPD

This is a computer file maintenance entry and normally will not be utilized on the field card. The purpose of the delete is to remove all data previously entered in the computer for fields 500-658. This function is initiated by selecting option "06" from the On-Line Menu of the Residential sub-system.

500 RESIDENTIAL IMPROVEMENT INDICATOR RES S5 Required

Four alternatives are provided. Only one of the below entries may be entered.

V VACANT LOT - This category is to be entered if the parcel to be described is vacant (no improvements). No improvement information is to be entered.

D DWELLING - This category is to be entered if the parcel to be described has a dwelling on it. Information MUST be entered in both the 500 and Sketch Vectoring fields and MAY be entered in the Addition and OBY fields.

M MOBILE HOME - This category is to be entered if the structure to be described is a mobile home. Information MUST be entered in the 500 and Sketch Vectoring fields and MAY be entered in the Addition and OBY fields.

O OTHER - This category is to be entered if the parcel to be described is not vacant but only contains buildings that will be listed under OB&Y and/or Gross Building Summary. No information may be entered in the 500 fields.

08/01/89

[illegible]

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

505 STORY HEIGHT RES S5

Required entry for dwellings.

Enter the actual story height of the dwelling. Use the height which is most representative of the dwelling's story height. Enter the number of full stories in the left-hand position before the decimal point. There must be at least one full story. Enter the number of half stories ("0" for none, "5" for a half story) in the right-hand position, after the decimal point.

1.0 to indicate one story.

1.5 to indicate one and one-half stories.

2.0 to indicate two stories.

2.5 to indicate two and one-half stories.

3.0 to indicate three stories.

3.5 to indicate three and one-half stories.

NOTE: Be careful about what constitutes a full story, a half story, and an attic. Refer to the story height illustrations found in the Appendix of this Section.

USE STORY HEIGHT INDICATOR - enter a 'Y' in this field if the sketch vectoring and cost programs are to use a story height factor in the programs.

506 EXTERIOR WALLS RES S5

Required entry for dwellings and mobile homes.

WALL CONSTRUCTION - Determine the predominate type of wall construction, select its code from the table below, and enter the code in the first position of this field. Other types of wall construction can be made equivalent to one of the below (i.e., prefab metal to frame, stone to masonry).

1 FRAME

2 MASONRY and FRAME

3 MASONRY

4 LOG (not log over frame)

EXTERIOR FINISH - Determine the predominate type of exterior finish, select its code from the table below, and enter the code in the second position of this field.

0 OTHER - to indicate any other type of exterior finish markedly different in appearance and which cannot be equated to one of the below.

1 STUCCO - to indicate Stucco over frame or Permastone or Formstone.

2 SHINGLE - to indicate shingles or shakes.

3 MASONITE - to indicate hardboard of any type.

4 ASBESTOS - to indicate Asbestos Shingle or Plank.

5 ALUMINUM / VINYL / STEEL - to indicate aluminum, vinyl, or steel siding or sandwich panels.

6 WOOD SIDING or SHEATHING - to indicate solid board.

7 STONE - to indicate cut stone veneer, or reinforced concrete.

8 BRICK - to indicate solid masonry, brick on block, or veneer.

9 BLOCK - to indicate concrete block, structural clay tile, stucco over concrete block.

507 STYLE RES S5

Required entry for dwellings.

Enter the code which is most representative of the style of the dwelling. Examples of the various house styles can be found in the Appendix of this Section.

01 BI-LEVEL - (SPLIT FOYER, SPLIT ENTRY, RAISED RANCH, HILLSIDE RANCH, PENTHOUSE) ... a contemporary one story house which provides (or has the potential to be finished to provide) two levels of living area. The lower level is either a raised ("true" or "English") basement which protrudes about four feet above grade or a "walkout" type basement which has one side exposed at grade level when the house is built into a hillside. The Split Foyer or Split Entry has the front door at ground level halfway between the raised basement and first floor. The Raised Ranch or Hillside Ranch typically incorporates a basement garage and/or a "walkout" recreation room on the lower level. The Penthouse has the main entrance located on the basement level.

- 02 SPLIT LEVEL (TRI-LEVEL, SIDE-TO-SIDE SPLIT, FRONT-TO-BACK SPLIT, BACK-TO-FRONT SPLIT) ... a contemporary house with three basic living levels (not counting a basement, if present). Typically, the room layout consists of a garage and/or recreation room on the lower level, with the living room about a half flight of stairs up on the middle level. The bedrooms are located on the upper level over the recreation room or garage.
- 03 RANCH (RAMBLER, TRUE RANCH, CALIFORNIA RANCH) ... a contemporary one story house with all habitable rooms and automobile storage located on one level. If a basement is present, it is typically a utility or storage type.
- 04 MODERN (ULTRA-MODERN, POST-MODERN) ... houses which are innovative or unique in design, use of construction methods or materials. These are typically architect designed and built homes which belong in a class by themselves. If it can be identified, the specific style should be recorded in the NOTES section. Early 20th century architectural movements in this category include the Prairie, International, Art Deco, Art Moderne, and Miesian schools. Contemporary examples in this class would also include products of recent movements such as Brutalism, High Tech, Post Modern, and International Revival.
- 05 TRADITIONAL or VICTORIAN (GOTHIC REVIVAL, CARPENTER GOTHIC, ITALIANTE, OCTAGON, RENAISSANCE REVIVAL, STICK, SECOND EMPIRE, HIGH VICTORIAN GOTHIC, QUEEN ANNE, EASTLAKE, RICHARDSON ROMANESQUE, SHINGLE) ... a rich and expressive architectural period which began around 1840 and continued to 1900. This style of dwelling is typified by asymmetrical shapes and silhouettes, often with steep intersecting gable roofs, towers, dormers and bay windows. Vertical emphasis is provided by the use of tall chimneys and turrets. Complicated scrollwork (gingerbread) and elaborate turned trimmings are prevalent items of decor.
- 06 EARLY AMERICAN (COLONIAL, GARRISON COLONIAL, SALTBOX, GEORGIAN, FEDERAL, DUTCH COLONIAL, SOUTHERN COLONIAL, JEFFERSONIAN, GREEK REVIVAL, GEORGIAN REVIVAL, COLONIAL REVIVAL) ... almost all pre-Civil War American architecture is generally classified as a type of Colonial. This catch-all grouping includes true period homes and contemporary replicas. Although elements of this style are a major component of today's contemporary-traditional vernacular, only historically accurate examples belong in this category. Thus, most newer homes which contain only traces or idiosyncrasies of colonial architecture would not fall in this category.
- 07 EARTH SHELTERED (UNDERGROUND) ... a contemporary house built below ground level or into a hillside. The roof is covered with earth except for skylights, a clerestory window, or possibly an atrium.
- 08 CONVENTIONAL (CONTEMPORARY, FUNCTIONAL MODERN) ... contemporary one to three story houses with conservative architecture in the 20th century vernacular mode. These houses may incorporate elements of Traditional, Spanish, Colonial, Elizabethan, or period designs, but they are not true replicas.
- 09 BUNGALOW (CALIFORNIA BUNGALOW, AIRPLANE BUNGALOW, CRAFTSMAN BUNGALOW) ... a picturesque cottage-like house introduced around 1900 and very popular through the 1930's. The informal plan, elevation, and detail featured low simple lines, a wide projective gable roof, large porches, a walkway stoop, and rough natural construction materials. Typically a one story residence, however, one and one-half story versions may incorporate a low shed dormer. The Airplane Bungalow has a small two story addition in the rear.
- 10 OLD STYLE (TRI-GABLE ELL, UTILITARIAN COTTAGE, AMERICAN FOURSQUARE, FARMHOUSE, PRINCESS ANNE, SHIRTWAIST) ... mid 19th century and early 20th century pattern book vernacular style houses which are transitions from the Victorian era or

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

provincial examples of Georgian revivals or picturesque English style period homes.

- 11 LOG ... this category has exterior walls built of logs, either in round or squared shape.
- 12 CONDOMINIUM ... this category identifies a distinct type of ownership. The unit living area is owned exclusively (fee simple) by the unit owner. The other components; land, common hallways, stairways, roof, foundation, and exterior recreation features, such as pools, tennis courts, etc., are owned in common by all unit owners. They may be townhouse, hi-rise, or garden apartment in style.
- 13 A-FRAME ... this category has a frame in the shape of one or more "A's". A-Frames have very steep gable roofs, front and rear walls usually have large glass areas. A-Frames have been popular since WWII.
- 14 OTHER (SHANTY, BASEMENT FOUNDATION HOME, SOD, QUONSET HUT, GEODESIC DOME, PREFABRICATED DYMAXION, CONVERTED BARN, FANTASY, FREEFORM, SILO/YURT KIT HOMES, PREFABRICATED MODULAR) ...truly unique or rare architectural examples which do not fall into any previously mentioned category can be indicated as Other. If using this entry, enter a description of the STYLE in the NOTES field.

508 ROOF **RES S5**
Required entry for dwellings and mobile homes.

ROOF TYPE - Enter the code that best describes the type of roof of the subject property. Illustrations of the different roof types are in the Appendix of this Section.

- 0 OTHER
- 1 FLAT
- 2 HIP
- 3 GABLE
- 4 GAMBREL
- 5 SHED
- 6 MANSARD
- 7 ARCHED
- 8 A-FRAME
- 9 BROKEN GABLE

ROOF MATERIAL - Enter the predominant type of roofing material, selecting the code from the table below.

- 1 WOOD SHINGLE to indicate a roof material composed of small sheets of redwood, white or red cedar machined to a uniform thickness and size. (Do not be fooled by old warped wood shingles which look like shakes).
- 2 SLATE to indicate a natural, durable, stone used as a shingle. It is a fireproof, but brittle surface, about 3/16" thick and milled into various shapes. Colors range from grey to various hues of red, green, or purple.
- 3 TILE to indicate a usually half-round product made of either clay or concrete which has been kiln baked to a hardness which gives a wearing surface that needs no paint. It usually has various red shades.
- 4 COPPER to indicate a roof made of copper.
- 5 METAL to indicate a roof made of sheets of corrugated galvanized metal, flat, standing seam or batten seam plates.
- 6 WOOD SHAKE to indicate a roof material very similar to wood shingle, except for various thicknesses and slightly irregular shapes due to splitting rather than cutting the wood.
- 7 COMPOSITION ROLL to indicate a roofing material made of a compressed fiber or paper material saturated with asphalt and rolled out over wood sheathing.
- 8 BUILT UP TAR AND GRAVEL (ROCK) to indicate roofing that is built up by laying roofing felt with overlapping seams, then sealed by mopping with hot tar or roofing compound. The final coat of tar can be covered with small gravel. This is the most common roof material for flat roofs and underground homes.
- 9 ASBESTOS to indicate a rigid, grey, non-flammable natural mineral fiber shingle formed into a diamond or hexagonal shape (a barrel shaped cap rises from the roof ridge).

PART 3: DATA COLLECTION

10 ASPHALT SHINGLE to indicate a flexible composition or fiberglass shingle applied over roofing felt (most commonly used in new construction).

11 OTHER to indicate a roof material not listed above, which includes enamel metal shingles, thin membrane terne, or built up concrete.

515 FOUNDATION RES S5
Required entry for dwellings and mobile homes.

Enter the predominant type of foundation, select its code from the table below.

0 NONE to indicate a dwelling with no foundation (i.e. dirt or mud sills).

1 WOODEN or MASONRY PIERS / POSTS to indicate that the dwelling has piers for a foundation.

2 CONCRETE to indicate a continuous foundation wall of poured in place reinforced concrete.

3 SLAB to indicate a monolithic poured slab with no additional foundation or footing.

4 WOOD to indicate that the foundation for the dwelling is constructed of decay resistant, impregnated wood.

5 BLOCK to indicate a continuous foundation wall constructed of concrete, structural clay tile, or cinder shaped in the form of hollow blocks, layered or stacked.

6 STONE to indicate a continuous masonry foundation wall constructed of rubble or cut stone laid in place.

7 OTHER to indicate a type of foundation wall that does not fall into the above categories.

520 BASEMENT RES S5
Required entry for dwellings and mobile homes.

Indicates the presence of basement area.

TYPE - Enter the code that describes the basement area. The area of the unfinished basement will be automatically calculated for the dwelling if BASEMENT is coded 2 or 3, or if basement area is coded as an Addition (Addition Code = 50).

0 NONE to indicate that the dwelling has no basement area.

1 CRAWL to indicate that the area below the dwelling is unfinished, accessible but less than a full story height, or is only 25% or less of the first floor area.

2 PART to indicate that the basement area is greater than 25% but less than 75% of the first story area.

3 FULL to indicate that the basement area is 75% or more of the first floor area.

DAYLIGHT BASEMENT - Enter a "Y" if the building contains a daylight basement or an "N" if it does not. To qualify as a daylight basement, the major portion of at least one wall must be exposed and the outside entrance must be at ground level or above. In most instances, daylight basements will be located on hillsides and sloping or terraced parcels.

521 FINISHED BASEMENT RES S5
Optional

Indicates the presence of an area of the basement which is finished with a quality of material and workmanship consistent with the main living area of the dwelling (such as the lower or grade level of bi-level and split level dwellings).

AREA - Enter either the appropriate dimensions or the square foot area of the finished basement living area.

QUALITY GRADE - Enter the code that describes the quality of the finish in the basement.

1 MINIMAL

2 FAIR

3 TYPICAL

4 GOOD

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

While this field must be coded, it will only affect the value produced for the 1987 reappraisal cycle.

GRADE VARIATION - This field is exclusively for the 1982 cycle - Primary concern is given to the quality of workmanship and material in the finished part of the basement in comparison to the rest of the building. If the quality grade of the finished basement is the same as the rest of the building, leave this field blank.

If the quality of the finished basement is less than the quality of the main part of the building, enter a "-" in the left-hand position and your estimate of the quality percent difference in the right-hand positions.

If the quality of the finished basement is more than the quality of the main part of the building, enter a "+" in the left-hand position and your estimate of the additional quality in terms of a percentage in the right-hand position.

525 HEATING & COOLING RES S5

Required entry for dwellings and mobile homes.

Refers to the presence of and type of heating system. Four alternatives are provided. Enter the type which is most representative of the subject property.

- 0 NONE to indicate that the subject dwelling does not have a heating system ... warranting a full deduction from the base price for "no heating," as indicated by the pricing schedule.
- 1 NON-CENTRAL to indicate that the subject dwelling has a heating system that is considered non-central for the area being heated ... warranting a partial deduction from the base price for central heating. Examples of non-central systems include floor or wall furnaces, electric baseboard or radiant ceiling heat.

NOTE: Floor furnaces in dwellings with under 600 SFLA should be considered "central." Floor furnaces in dwellings with over 600 SFLA should be considered "non-central," as they become inadequate and inefficient to heat the required area.

- 2 CENTRAL to indicate that the subject dwelling has a central system commensurate with the quality grade specifications of the dwelling ... warranting no addition to or deduction from the base price. Such systems may include gravity furnaces, radiant hot water and forced warm air furnaces.
- 3 CENTRAL / AIR CONDITIONING to indicate that in addition to a central heating system, the subject dwelling has (either separately or combined) a central cooling system commensurate with the quality grade specifications of the dwelling ... warranting an addition to the base price for "air conditioning," as indicated by the pricing schedule. If a cooling system as described exists in the dwelling, enter only this numeric code. This code implies that a central heating system exists.

HEATING FUEL TYPE - Enter the code describing the predominate type of fuel used by the heating system.

- 0 NONE - No heating system exists. The only heat is derived from a fireplace, a freestanding space heater or a cook stove.
- 1 COAL
- 2 OIL
- 3 GAS (either natural gas or liquified petroleum gas)
- 4 ELECTRICITY
- 5 SOLAR to indicate either a passive or an active solar system.
- 6 WOOD (not to be confused with 0-NONE above)
- 7 GEOTHERMAL

HEATING SYSTEM TYPE - Enter the code describing the type of heating system of the subject property. Disregard supplemental heating such as an electric baseboard unit in an isolated room or addition.

- 1 FLOOR / WALL / SPACE to indicate the presence of a wall, floor, or ceiling hung unit.
- 2 HOT WATER to indicate the system employs hot water to distribute the heat by baseboard or radiators.

PART 3: DATA COLLECTION

- 3 STEAM to indicate the system employs steam to distribute the heat by baseboard or radiators.
- 4 GRAVITY HOT AIR to indicate the system has ducts but no means other than gravity flow to distribute the heat (gravity hot air).
- 5 FORCED AIR to indicate the presence of a warm air system. With this system, the furnace has a fan or blower that pushes the warmed air through relatively small ducts. These ducts may run horizontally or vertically. Filters can be installed in the system to clean the air and a humidifying system included to add needed moisture.
- 6 HEAT PUMP to indicate a reverse cycle refrigeration unit which can be used for heating and cooling.
- 7 ELECTRIC BASEBOARD / RADIANT to indicate the presence of an electric heating system. This system is characterized by electric resistance elements that convert electricity into heat. These elements are embedded in the floors, walls, ceilings, or baseboard to provide radiant heat.
- 8 PACKAGE AIR CONDITIONING to indicate the system has package air conditioning.
- 9 HOT / COOL AIR to indicate a system utilizing warm and cool air (gas fired forced hot air with gas or electric refrigerated cooling).

528 HEATED FLOOR AREA RES S5
Optional

The heated area will normally be the total finished area of the building (first floor, upper floors, finished basement). However, if some areas such as attics or half stories have been finished with no provision for heating, except portable electric units, fireplaces or robber ducts, exclude this area from the total heated area. Do *not* include unheated or inadequately heated finished areas in the total heated areas.

Enter the total square footage of adequately heated areas, right-justified. If no heated area exists; if there is no heating system; or if the computer calculated area is correct, leave this field blank.

530 LIVING ACCOMMODATIONS RES S5
Required entry for dwellings and mobile homes.

Enter one or two numeric characters denoting the quantities of each of the items described below. If the item does not exist, enter zero.

TOTAL ROOMS - Enter the total number of separate rooms [excluding bathroom(s) and hallway(s)] comprising the living area of the dwelling (i.e., kitchens, living rooms, dining rooms, family rooms, dens, studies, and bedrooms).

BEDROOMS - Enter the total number of separate rooms designed to be used as bedrooms. Count each independent area that has a privacy door and a reach-in or walk-in closet for clothes storage and a window. If a room was designed to be a bedroom, but is being utilized for some other purpose (such as a den), it is still to be included in this count.

In a one room cabin, the one room is considered to be a living room not a bedroom.

FAMILY ROOMS - Enter the number of informal living rooms, quality of finish consistent with the general finish of the dwelling. Count all rooms classified as family rooms, dens and recreation rooms. These can be located on any floor or in the basement.

Do *not* count bedrooms being used as any of the above. If a room meets the standards for a bedroom, i.e., privacy, closet, window, access to a bath, and obviously was intended at construction to be a bedroom, then it is counted as a bedroom.

535 PLUMBING RES S5
Required entry for dwellings and mobile homes.

Enter either one or two numeric characters denoting the quantity of each item described below. Each character position must be filled in. Use leading zeros if necessary. If the item does not exist, enter zero.

FULL BATHS - Enter the number of three-fixture bathrooms which include a water closet, lavatory, and bathtub or shower stall (a bathtub with a shower outlet is considered one fixture).

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

HALF BATHS - Enter the number of two-fixture toilet rooms which include a water closet and lavatory.

ADDITIONAL FIXTURES - Enter the total number of individual plumbing fixtures that are not counted in full baths or half baths. Include water heaters, kitchen sinks, single toilets, single lavatories, single bathtubs and showers, wet bars and sinks in recreation areas. Also include laundry tubs or connections (water and drain) for automatic washer hookup, but not as two fixtures where both are present. Add one fixture for each roughed in bathroom.

TOTAL FIXTURES - this *computer generated field* is the total number of plumbing fixtures in the dwelling.

540 ATTIC RES S5
Required entry for dwellings.

NOTE: Be careful about what constitutes a full story, a half story, and an attic. Refer to the story height illustrations found in the Appendix of this Section.

ATTIC TYPE - Enter the code that describes the attic area.

- 0 NONE to indicate no attic.
- 1 UNFINISHED to indicate an unfinished attic having only a subfloor and stairs.
- 2 PARTLY FINISHED to indicate either an undivided (one room) full finished attic, or a divided (two rooms) attic with one-half (one room) finished and the balance unfinished.
- 3 FULLY FINISHED to indicate a divided (two or more rooms) fully finished attic.
- 4 FULL FINISHED with WALL HEIGHT to indicate a divided (two or more rooms) fully finished attic which includes the presence of one or more small dormers. This category should be used when the existing wall height is not enough to be considered a 1.5 or 2.5 story dwelling.

While this field must be coded, it will only affect the value produced for the 1987 reappraisal cycle.

GRADE VARIATION - This field is exclusively for the 1982 cycle - Primary concern is given to the quality of workmanship and material in the finished part of the attic in comparison to the rest of the building. If the quality is the same, leave this field blank.

If the quality of the attic is less than the quality of the main part of the building, enter a "-" in the left-hand column and your estimate of the quality percent difference in the right-hand column.

If the quality of the attic is more than the quality of the main part of the building, enter "+" in the left-hand column and your estimate of the additional quality in terms of a percent in the right-hand column.

545 GARAGE STALLS RES S5
Optional (Number of Cars)

To indicate the number of garage stalls associated with the dwelling. A stall is approximately 200 square feet.

BUILT-IN GARAGE - Refers to a finished garage built into a portion of the dwelling that would normally be considered finished living area. For example, a two story house with a garage built into the main ground floor area (not an addition) with living area above it. For description only, enter the car capacity of the built-in garage. The area for Built-In Garages must be accounted for in the Additions fields. See examples in the Appendix of this section.

BASEMENT GARAGE - Refers to finished garage built into a portion of the basement of the dwelling. Enter the car capacity of the basement garage.

550 MASONRY FIREPLACE RES S5
Optional

Indicates the presence of woodburning fireplace(s) constructed of masonry. If no such fireplace exists for the dwelling leave all fields blank. Masonry woodburning fireplaces which have been permanently closed off should not be listed.

STACK - Enter the number of fireplace chimneys, regardless of the number of stories and openings they contain.

PART 3: DATA COLLECTION

STORIES - For each chimney stack, count the number of stories (1.0, 1.5, 2.0, etc.) of the portion of the building to which it is attached. Add the story heights of all chimney stacks together. The sum will be in full-stories and a possible half story. Enter the number of full stories in the left-hand position before the decimal point. Enter a "0" if there is no additional half story, or a "5" if there is a half story, in the right-hand position after the decimal point. If you have a situation where the chimney extends into the basement, include the extended portion as part of the Total Chimney Height.

OPENINGS - Count each opening (fireplace) in each chimney. In a single chimney there might be openings in the basement and on the second floor, in addition to one on the first floor. There may be a back-to-back fireplace on one floor with two separate fireboxes or outlets each serving a different room. There may also be a barbecue firebox built into the chimney.

551 PREFAB FIREPLACE AND STOVE RES S5 Optional

A prefabricated fireplace is an open firebox unit of metal construction that is connected by pipes to a chimney. Enter the total number of such fireplaces. If there are no Prefab fireplaces, leave this field blank.

557-558 MISCELLANEOUS OTHER FEATURES Optional RES S5

Refers to the presence of MISCELLANEOUS OTHER FEATURES which are not typically found in dwellings, but are to be valued. Two character positions are provided to indicate a code describing the item, and two character positions are provided to indicate the number of items. Two distinct entries are allowed.

MISCELLANEOUS OTHER FEATURE CODE - enter the code that describes the feature. A maximum of two codes are permitted.

BD Built in Dishwasher
BF Built in Refrigerator
BI Built-in's from conversion
BM Built in Microwave Oven
BO Built in Oven
BR Built in Range
BT Built in Trash Compactor
CV Central Vacuum System

E2 Residential Elevator (2 stop)
E3 Residential Elevator (3 stop)
EF Exhaust Fan
GD Garbage Disposal
IC Inter-Com System
MS Miscellaneous Built-in's
SB Spa Bathtub
SL Stair Lift
SS Security System

QUANTITY - Enter the number of Other Features. If the code "BI" is entered, total the value of all OTHER FEATURES from the Cost Pricing Schedule, divide that sum by 100, and enter the point value in this field.

560 CONDOMINIUM LEVEL RES S5

Required entry for condominiums.

Enter the floor level on which the condominium is located. The field is numeric, and two character positions are provided to enter "00" through "99." Use leading zeros if necessary.

00 to indicate lower level (basement or garden level).
01 to indicate first floor.
02 through 99 to indicate second floor, etc.

561 CONDOMINIUM UNIT TYPE RES S5

Required entry for condominiums.

Four alternatives are provided. Enter the code which is most representative of the type of the condominium.

1 INTERIOR to indicate condominium is an interior unit.
2 CORNER to indicate condominium is either a corner or end unit.
3 UPPER LEVEL to indicate condominium is on a floor other than ground level and is not a penthouse unit.
4 PENTHOUSE to indicate condominium is a penthouse unit.

562 CONDOMINIUM AMENITIES RES S5

Required entry for condominiums.

Enter the code that indicates the most significant amenity available to this unit.

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

- 0 NONE to indicate that none of the amenities listed below apply to this condominium.
- 1 WATERFRONT to indicate condominium is on the waterfront.
- 2 WATERVIEW to indicate condominium has a view of a lake, river, etc.
- 3 GOLF COURSE VIEW to indicate . condominium is either on a golf course or has a view of a golf course.
- 4 MOUNTAIN VIEW to indicate condominium has a view of a mountain.

566 MOBILE HOME RES S6

Required entry for mobile homes.

MAKE - Enter, left-justified, the make of the mobile home. If MAKE is not known, enter "UNKNOWN".

MODEL - Enter, left-justified, the model of the mobile home. If MODEL is not known, enter "UNKNOWN".

YEAR - Enter the last two digits of the year in which the mobile home was constructed.

567 MOBILE HOME SERIAL / TITLE NUMBER RES S6

Optional entry for mobile homes.

Refers to the serial number given to the mobile home by the manufacturer and used for identification purposes, or the title number listed on the title for the mobile home. Enter the number left-justified.

568 MOBILE HOME DIMENSION RES S6

Required entry for mobile homes.

WIDTH - The width of a mobile home is determined by outside measurement of one of the two equal, shortest sections of the perimeter footage.

LENGTH - The length of a mobile home is determined by outside measurement of one of the two equal, longest sections of the perimeter footage. Do not include the towing tongue of the mobile home, if attached.

NOTE: The WIDTH and LENGTH dimensions of the mobile home should not include additions, expandos, or tip-outs. These items should be included as ADDITIONS.

570 AGE RES S6

Required entry for dwellings and mobile homes.

Enter the year of construction, the year of remodeling, and the effective year, if it is not the same as the original year of construction.

YEAR BUILT - Refers to the original date of construction. Do not consider remodeling or additions, only the original building. Enter the last three digits of the year of construction. If the exact date cannot be ascertained, make the best estimate possible based on known construction dates in the immediate area, and place an "X" in the YEAR BUILT ESTIMATED.

YEAR REMODELED - Optional entry. Refers to the date of the last extensive remodeling, i.e., remodeling which significantly alters the "effective age" of the dwelling. Enter the last two digits of the year of remodeling. This field is descriptive only and will not effect depreciation calculations. If the dwelling has not been remodeled, leave this item blank.

EFFECTIVE YEAR - Optional entry. This entry, if entered, will override the year of construction in determining the depreciation for the dwelling. Enter the last two digits of the effective year.

If the condition of the building is better than average, the effective year will be more recent than the actual year built. If the condition is worse than average, the effective year will be greater than the actual year built.

Major alterations, additions or rebuilding can extend the useful life of a building and add to its present value. In such cases, the chronological life is not a solid indication of the amount of depreciation that should be applied. The "effective age" should be the guide.

The cost of alterations and additions cannot be added directly to the previous appraised value of the buildings. A method for indicating how alterations, additions, and remodeling can impact the "effective age" of a building, is stated below:

PART 3: DATA COLLECTION

Great care must be exercised when using this method. Minor errors in remodeling percentages and chronological building life quickly render this method unacceptable. There is no substitute for the appraiser's analysis and *supportable* opinion. On dwellings that have exceeded 60 years effective age, use extreme caution. The analysis required to determine correct depreciation levels should include the comparison of replacement cost values to market evidence.

Example 1:

A building built in 1937, was remodeled by 20% in 1979 (presume the current year is 1988):

$$1988-1937 = 51 \times 80\% = 4080$$

$$1988-1979 = 9 \times 20\% = \underline{180}$$

$$\text{Total } 4260 / 100 = 43 \text{ years effective age}$$

$$1988 - 43 = 1945 - \text{therefore, enter "45" in EFFECTIVE YEAR.}$$

Example 2:

A building built in 1948, was remodeled by 30% in 1987 (presume the current year is 1988):

$$1988-1948 = 40 \times 70\% = 2800$$

$$1988-1987 = 1 \times 30\% = \underline{30}$$

$$\text{Total } 2830 / 100 = 28 \text{ years effective age}$$

$$1988 - 28 = 1960 - \text{therefore, enter "60" in EFFECTIVE YEAR.}$$

571 DEPRECIATION

RES S6

Optional

This field is exclusively for the 1982 cycle.

Depreciation goes to work immediately upon completion of a building and continues until the building is no longer usable. It is used in the cost approach to value and is the difference, stated as a percentage, between the current replacement cost of the building and its estimated market value.

The three types of depreciation that can affect value are physical deterioration, functional obsolescence and economic obsolescence. These are further broken down into curable and incurable.

If abnormal depreciation is applied to a building, be sure to explain the reasons in the NOTES section (fields 481-483).

PHYSICAL DEPRECIATION - This field is exclusively for the 1982 cycle - Physical depreciation can be detected and recognized by personal inspection. It may consist of wear and tear of such items as gutters and downspouts, windows and screens or there may be a need for painting or redecorating. Loose siding, missing shingles, rusted flashing and valleys, cracked plaster, loose electrical switches and broken fixtures, leaking plumbing or a furnace or boiler in bad repair are among other indications of physical deterioration. These conditions are usually curable and should be a part of the normal maintenance given the structure. There is, however, other evidence of the deterioration of the bone structure of a building; such as a settling of foundations, cracked bearing walls, broken floor joists or sagging rafters that might indicate an incurable condition because it may not be economically sound to repair the defects.

Enter the amount of physical depreciation in whole percent, right-justified. Physical depreciation must be greater than zero and no greater than 80%.

FUNCTIONAL OBSOLESCENCE - This field is exclusively for the 1982 cycle - Functional obsolescence reflects the loss of value because of decreased utility or desirability in a structure caused by such things as outmoded plumbing or heating, insufficient electrical outlets or abnormally high ceilings, etc. These are usually curable. Other conditions, such as outmoded architecture, a poor floor plan or columns and bearing walls that interfere with the proper utilization of space may not be possible to cure or may not be curable from an economic standpoint. It is possible to build an undesirable feature and functional obsolescence into a new building.

Enter the amount of functional obsolescence in whole percent, right-justified. The obsolescence must not be greater than 80%.

ECONOMIC OBSOLESCENCE - This field is exclusively for the 1982 cycle - Economic obsolescence is caused by forces outside of the building itself, such as business encroachment into a residential district or an influx of inharmonious inhabitants into a neighborhood. It is very seldom, if ever, curable.

Enter the amount of economic obsolescence in whole percent, right-justified. The obsolescence must not be greater than 80%.

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

572 PHYSICAL CONDITION RES S6
Optional entry for dwellings and mobile homes.

Refers to a composite judgment of the overall physical condition or state of repair of the interior and exterior features of the dwelling relative to its age; or the level of maintenance which you would normally expect to find in a dwelling of a given age. This field is descriptive only and will not effect depreciation calculations.

Consideration should be given to foundation, porches, walls, exterior trim, roofing, chimneys, wall finish, interior trim, kitchen cabinets, heating system, and plumbing. Six alternatives are provided. Enter the code which is most representative of the subject property. Only one selection may be entered.

- 1 **UNSOUND** to indicate that the dwelling is structurally unsound, not suitable for habitation, and subject to condemnation. It is unfortunately possible that some dwellings may be occupied, but still suitable for coding as unsound.
- 2 **POOR** to indicate that the dwelling shows many signs of structural damage (such as a sagging roof, foundation cracks, uneven floors, etc.), possibly combined with a significant degree of deferred maintenance (such as roof shingles need replacement).
- 3 **FAIR** to indicate that the dwelling is in structurally sound condition, but has greater than normal deterioration present relative to its age. Dwellings in "fair" physical condition may be characterized as having a significant degree of deferred maintenance.
- 4 **AVERAGE** to indicate that the dwelling shows only minor signs of deterioration caused by normal "wear and tear." The dwelling exhibits an ordinary standard of maintenance and upkeep in relation to its age.
- 5 **GOOD** to indicate that the dwelling definitely exhibits an above ordinary standard of maintenance and upkeep in relation to its age.
- 6 **EXCELLENT** to indicate that the dwelling exhibits an outstanding standard of

maintenance and upkeep in relation to its age.

573 GRADE RES S6
Required entry for dwellings and mobile homes.

The accuracy of a residential appraisal depends largely upon the selection of the correct grade. Grade represents quality. Quality applies to both workmanship and type of materials used. The combination of quality workmanship and materials reflects increased cost and value. The value of a dwelling constructed of high quality materials and with the best of workmanship throughout may be considerably more than that of one built from the same floor plan with inferior materials and workmanship.

The grading of structures is used to distinguish between variations in value and to identify the full range of conventional single family residential construction. The specifications of type of facilities may not vary greatly between grades; however, the quality of materials, workmanship and design may be decidedly different.

The majority of dwellings fall within the definite grade of construction incorporating average quality of workmanship and materials. Consequently, better quality of construction, or construction of cheaper quality, can be determined by comparison with the average. A thorough inspection of both the inside and outside of a structure will reveal evidence of degrees of quality.

There are many chances for error in selecting the proper grade for a residence; such as grading the homemaker's housekeeping ability, giving too much credit to the landscaping, being influenced by a new paint job, or the lack of proper maintenance. Always look for quality or the lack of it, and if the house happens to be older, try to picture the quality it represented when new and grade it as if it were new. Adjustments for condition will be made through application of depreciation.

Grading would be a relatively simple process if all houses were built to conform to the base specifications. Since this ideal condition does not exist, it becomes necessary to further refine the grading system. It is not unusual for conventional houses to be built incorporating construction qualities that fall in between the specifications of these established grades. If the house that is being

PART 3: DATA COLLECTION

appraised does not fall exactly in a specific grade, the grade designation should be adjusted as deemed necessary by the use of the **GRADE VARIATION**.

GRADE - This manual has eight basic grades of residences. Enter the grade of the structure from "1" to "8", inclusive.

- | | |
|---|-----------|
| 1 | CHEAP |
| 2 | POOR |
| 3 | LOW COST |
| 4 | FAIR |
| 5 | AVERAGE |
| 6 | GOOD |
| 7 | VERY GOOD |
| 8 | EXCELLENT |

The basic grade, representing costs of construction with average quality of workmanship and materials involved, is designated as Grade 5.

For mobile homes a separate grading system has been devised. The following grades and codes must be utilized for mobile homes.

- | | |
|---|-----------|
| L | LOW COST |
| A | AVERAGE |
| G | GOOD |
| E | EXCELLENT |

GRADE VARIATION -

For the 1982 cycle - Enter the grade variation in whole percent, right-justified. Place the "+" or "-" sign in the left most position. It is not advisable to "plus" or "minus" a grade by more than 15%; however, it may be necessary to plus a grade 8 residence by 20% or more to realistically reflect its quality, and to minus a grade 1 residence by more than 20% for the same reason. If no grade variation is to be applied, leave this field blank.

For the 1987 cycle - Only a **GRADE VARIATION** of "+" or "-" will be utilized, no percent adjustment is permitted.

574 COST AND DESIGN FACTOR RES S6 Optional

Enter the code that best describes the **COST AND DESIGN FACTOR**. A position is provided to enter a plus "+" or minus "-" symbol, and two positions to enter two numeric characters denoting a percentage to be added to or deducted from the

accumulated total value of the dwelling (after applying the grade factor) for the cost and/or design factors not previously considered.

If no **COST AND DESIGN FACTOR** is to be applied to this dwelling, leave the fields blank.

- | | |
|----|---|
| AC | Additional costs not covered by grade assignment. |
| AS | Architectural style adjustment. |
| ED | Envelope dwelling construction adjustment. |
| EW | Exterior wall material inconsistent with overall grade. |
| GD | Geodesic dome construction adjustment. |
| IF | Interior finish inconsistent with overall grade. |
| LD | Log dwelling construction adjustment. |
| MS | Mechanical system inconsistent with overall grade. |
| RM | Roof material inconsistent with overall grade. |

575 FLAT ADD COSTS RES S6 Optional

Costs that are included in this field will be depreciated. The trending and Economic Condition Factor fields will affect this value for all structures.

Enter the total cost of all extra features in the principal building that would *not* be automatically covered by the standard cost and grade schedules for features enumerated in Items 501 through 574. Costs considered must be the excess *over and above* the usual costs for the grade and *subtractions* from the usual costs for the grade. Make sure to enter the "+" or "-" symbol for any flat add costs. Include in the **NOTES** (fields 481-483) a description of the **FLAT ADD COST** items.

If there are no **FLAT ADD COSTS**, leave this field blank.

576 CDU (Condition - Desirability - Usefulness) RES S6

Required entry for dwelling and mobile homes.

This field is used in the depreciation of the structure. Enter the code denoting the composite rating of the overall condition, desirability, and usefulness of the dwelling.

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

- UN UNSOUND to indicate that the dwelling is definitely unsound and practically unfit for use.
- VP VERY POOR to indicate that the condition approaches unsoundness; extremely undesirable and barely usable.
- PR POOR to indicate definite deterioration is obvious; definitely undesirable and barely usable.
- FR FAIR to indicate marked deterioration, but quite usable; rather unattractive and undesirable.
- AV AVERAGE to indicate normal "wear and tear" is apparent; average attractiveness and desirability.
- GD GOOD to indicate minor deterioration is visible; slightly more attractive and desirable, but useful.
- VG VERY GOOD to indicate slight evidence of deterioration; attractive and quite desirable.
- EX EXCELLENT to indicate perfect condition; very attractive and highly desirable.

577 PERCENT COMPLETE

RES S6

Optional

Use only if a new dwelling is partially completed to indicate percentage of completion as of the General Assessment Day. Do *not* consider remodeling, additions or older improvements with unfinished areas. Enter the percent complete in whole percent, right-justified.

Refer to the Percent Complete table in the Appendix of this Section, for estimating unfinished construction.

If dwelling is complete, leave this field blank.

581 FLOOR AREAS BY LEVEL

RES S6

Optional

Required entry when no sketch vectors are used.

For pricing of the structure, areas must be calculated by floor level. If the dwelling areas are sketched, the areas for this field will be automatically calculated by computer programs in

conjunction with the dwelling story height code, basement code, attic code and addition codes.

Manually entered values may be overridden by the computer generated areas from the Sketch Vector program. The person entering the sketch information will be asked if the current areas are to be overridden.

There may be instances, due to the complexity of the structure, where the dwelling may not be able to be sketched. In these cases, one must enter the appropriate areas by floor level in these fields.

BASEMENT AREA - enter the total basement area, regardless of whether the area is finished or unfinished.

FIRST FLOOR AREA - enter the total first floor area of the dwelling.

SECOND FLOOR AREA - enter the total second floor area of the dwelling.

ADDITIONAL FLOOR AREA - enter the total area of the upper floors of the dwelling.

HALF STORY FLOOR AREA - enter the total area of the half story of the dwelling. Use the "foot print" area of the floor below the half story for the area to be entered.

ATTIC AREA - enter the total area of the attic of the dwelling. Use the "foot print" area of the floor below the attic for the area to be entered.

582 UNFINISHED FLOOR AREAS BY LEVEL

Optional

RES S6

Required entry when there is unfinished area in the dwelling.

SECOND FLOOR AREA - enter the unfinished second floor area of the dwelling.

ADDITIONAL FLOOR AREA - enter the unfinished area of the upper floors of the dwelling.

HALF STORY FLOOR AREA - enter the unfinished area of the half story of the dwelling.

ATTIC AREA - enter the unfinished area of the attic of the dwelling.

PART 3: DATA COLLECTION

599 DELETE: ADDITIONS

RES GPD

Optional

This is a computer file maintenance entry and normally will not be utilized on the field card. The purpose of the delete is to remove all data previously entered in the computer for fields 601 - 608. This function is initiated by selecting option "06" from the On-Line Menu of the Residential sub-system.

601-608 ADDITIONS

RES S7

Optional

Enter the Addition Code that describes the area of the dwelling. The same Addition Code may be entered any number of times. Space is provided for eight separate entries of additions. Enter the appropriate Addition code in the column that corresponds with its floor level; either LWR (lower level or basement), 1ST, 2ND, or 3RD (any floor above 2nd floor). Refer to the *Table of Addition Codes*.

If no additions are present, leave the entries blank.

Normally, leave the AREA column blank because the area of the Addition will be calculated and entered in the field by the Sketch Vector program. Consult the Sketch Vectoring instructions in Section 35 for specific guidelines on how to sketch Additions.

If the dwelling cannot be sketch vectored and therefore no data is entered in SKETCH VECTOR fields (651 to 658), both the field FLOOR AREAS BY LEVEL (581) and the AREA column of each ADDITION line (601 to 608) used must be entered.

In cases where there is a stacked addition with an identical floor area for each level (for example, a 2 story, open frame porch), enter the Addition Code for open frame porch (11) in both the 1ST and 2ND column for that addition.

In the rare case where there are more than eight additions on a dwelling, one must enter a manually calculated point total of all the additions not previously entered. First, enter the Addition Code "99", Miscellaneous Value, in the LWR column of field 608. Then, enter the manually calculated total points of the remaining Additions not entered, in the AREA column of this line. No other information should be entered in the remaining areas of this line. Each value point is equal to \$100.

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

TABLE OF ADDITION CODES

The following are the valid Addition Codes and the corresponding abbreviations.

Addition Type	Finished		Unfinished	
	Frame	Masonry	Frame	Masonry
Living Area	10 1SF	20 1SM		
Utility Area	15 UTF	25 UTM	65 UTFU	75 UTMU
Bay Window	16 BAYF	26 BAYM		
Overhang/Oriel Window	66 OVHF	76 OVHM		
Half Story	17 HSF	27 HSM		
Attic	18 AF		68 AU	
Garage	19 GRF	29 GRM	69 GRFU	79 GRMU
Carport	30 CPF	40 CPM	80 CPU	
Garage Extension	31 GREF	41 GREM		
Canopy	32 CANF		82 CANU	
Attached Greenhouse	37 AGH			
Basement			50 BU	
Mobile Home Addition	91 MHA			
Expandos and Tipouts	92 MET			

Addition Type	Frame	Masonry
Open Porch	11 OPF	21 OPM
Screened Porch	12 SPF	22 SPM
Enclosed Porch	14 EPF	24 EPM
Decks/Patios/Terraces		
Wood	33 D-WD	
Concrete	34 D-CO	
Stone Tile	35 D-ST	
Masonry Stoop	36 D-MS	
Ornamental Brick Trim	85 OBT	
Solar Collector Area	97 SCA	
Miscellaneous Value	99 MV	

PART 3: DATA COLLECTION

Examples 3 and 4 show how Addition Codes are used and entered.

Example 3:

Subject dwelling has an attached, 180 square foot, open frame porch over an enclosed frame porch, and a 440 square foot attached frame garage.

ATT	CD	LWR	1ST	2ND	3RD	AREA
601-A	A1		14	11		****
602-B	A2		19			****

NOTE: The areas will be calculated by the Sketch Vector program.

Example 4:

Subject dwelling has the following additions:

- 120 square foot open frame porch
- 60 square foot open frame porch
- 40 square foot open frame porch over 60 square foot enclosed frame porch

NOTE: Two entries will be necessary because the areas are different for the two porches.

- 240 square foot greenhouse
- 350 square foot frame living area
- 300 square foot frame garage
- 80 square foot garage extension
- 50 square foot canopy

ATT	CD	LWR	1ST	2ND	3RD	AREA
601-A	A1		11			****
602-B	A2		11			****
603-C	A3		14			****
604-D	A4		11			****
605-E	A5		37			****
606-F	A6		10			****
607-G	A7		19			****
608-H	A8	99				12

NOTE: Since the number of Addition entries exceeds eight, it was necessary to utilize the numeric code "99" - Miscellaneous Value - and to manually calculate the point total of the garage extension and the canopy. For the remaining entries, the areas will be calculated by the Sketch Vector program.

This part provides guidelines for collecting and recording additional structures or site improvements not a part of the dwelling.

699 DELETE: OBY

RES GPD

Optional

This is a computer file maintenance entry and normally will not be utilized on the field card. The purpose of the delete is to remove all data previously entered in the computer for fields 701-711. This function is initiated by selecting option "06" from the On-Line Menu of the Residential sub-system.

701-706 OTHER BUILDING & YARD IMPROVEMENTS

RES S8

Optional

OBY TYPE CODES - Enter the Type Code that describes the improvement to be entered. A table of valid OBY codes follows the discussion of the OBY entries.

The OBY Type Code refers to a category of improvements such as pools, barns, etc., and therefore, stands for the overall improvement itself and is made up of three parts.

- The first character stands for the overall property identifier describing the OBY Improvement.
- The second character stands for the structural category of the OBY Improvement.
- The third character is numeric, which distinguishes one type of OBY Improvement from another within the same category.

Several examples are listed below.

OBY

Type Code	1st Char. Meaning	2nd Char. Meaning	3rd Char. Meaning
RG1	Residential	Garage	Frame or CB
RG2	Residential	Garage	Brick or Stone
AM1	Agricultural	Milk House	Concrete Block
AM2	Agricultural	Milk House	Glazed Tile

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

QUANTITY - Enter the number or quantity of totally identical OBY Improvements being listed.

YEAR - Enter the year the OBY Improvement was constructed. Enter only the last two digits. If built prior to 1900, enter "00." If the year built is unknown, make the best estimate possible.

SIZE - Enter either the square foot area, the dimensions, or the volume of the item based on the appropriate cost schedules.

To enter the square foot area, positions are provided for six numeric characters (up to 999,999 square feet). The square footage or volume should be right-justified. If necessary, enter leading zeros.

To enter the dimensions, positions are provided to enter six characters: two numeric characters denoting either the width or diameter, a multiplication symbol (X), and three numeric characters denoting the length or height of the item. The multiplication symbol must always be entered in the third character position from the left (within the two vertical hash marks). All character positions must be filled in. Use leading zeros if necessary.

GRADE - Enter the code denoting the quality grade of the item. If a quality grade is not applicable to the item, leave the field blank.

Residential Structures	Description
---------------------------	-------------

1	Cheap
2	Poor
3	Low Cost
4	Fair
5	Average
6	Good
7	Very Good
8	Excellent

Agricultural Structures	Description
----------------------------	-------------

C	Cheap
L	Low Cost
A	Average
G	Good
E	Excellent

CONDITION - Enter the code that identifies the overall condition of the improvement.

- U UNSOUND to indicate that the dwelling is definitely unsound and practically unfit for use.
- P POOR to indicate definite deterioration is obvious; definitely undesirable and barely usable.
- F FAIR to indicate marked deterioration, but quite usable; rather unattractive and undesirable.
- A AVERAGE to indicate normal "wear and tear" is apparent; average attractiveness and desirability.
- G GOOD to indicate minor deterioration is visible; slightly more attractive and desirable, but useful.
- E EXCELLENT to indicate perfect condition; very attractive and highly desirable.

RATE - This is a calculated field ... refers to the unit value which when multiplied with the size is the base value, replacement cost new.

INDEX - This is a calculated field ... refers to the factor which when multiplied with the replacement cost new less depreciation value is the value of the improvement.

PERCENT GOOD - Optional entry.

Refers to the resultant value (percent good) after deduction of physical depreciation and functional and/or economic obsolescence - expressed as a percentage.

This is not a required entry. OBY Improvements are computer-priced and computer-depreciated. If this entry is used, it will function as an override to the computer generated depreciation and therefore the value of the improvement.

PART 3: DATA COLLECTION

MODIFICATION CODES - Optional entry.

Refers to an addition or deduction made to alter the cost component of the improvement from the base specifications. Modification Codes are identified by a numeric character and should only be utilized for the specific structure(s) intended. Enter left-justified. Up to four modification codes are allowed per OBY improvement. The valid MODIFICATION CODES are listed for each OBY TYPE CODE in the Residential Other Building & Yard Improvements table.

FLAT VALUE - Optional entry.

This is not a required entry. OBY Improvements are computer-priced and computer-depreciated. If this entry is used, it will function as an override to the computer generated value of the improvement.

SPECIAL MODIFICATION CODES - Optional entry

Refers to a special modification made to alter the cost component of the improvement from the base

specifications. Special modifications are identified by a three-character code (as are the OBY improvements). The difference in using SPECIAL MODIFICATION CODES as opposed to regular MODIFICATION CODES is that a SPECIAL MODIFICATION CODE requires a separate line entry immediately below the OBY Type Code being modified. Other items necessary to describe the special modification must also be entered to allow for proper processing of the modification to an indication of value. The valid SPECIAL MODIFICATION CODES are listed for each OBY TYPE CODE in the Residential Other Building & Yard Improvements table.

NOTE: Special Modification Codes should only be utilized for the specific OBY improvement intended.

RCNLD - This is a calculated field. It refers to replacement cost new less depreciation.

Examples 5, 6, and 7 illustrate the concept of OTHER BUILDING & YARD IMPROVEMENTS:

Example 5: OBY Improvements on a Residential parcel.

- Detached brick finished garage, 22 ft x 24 ft
- Metal utility shed, 12 ft x 20 ft
- Reinforced concrete pool 16 ft x 32 ft with electric heating.

OB CODE	QUAN	YEAR	SIZE	G	COND	RATE	%GD	MOD CODE
701	RG2	01	65	— — 528	5	A		
702	RS2	01	60	— — 240	5	A		
703	RP3	01	73	16 X 032				3

Example 6: OBY Improvements on an Agricultural parcel.

- Barn, 24 ft x 60 ft, with gambrel roof
- One story, metal poultry house, 24 ft x 200 ft, with a single pitch roof.

OB CODE	QUAN	YEAR	SIZE	G	COND	RATE	%GD	MOD CODE
701	AB1	01	30	— 1 440	C	P		5
702	AH1	01	35	24 X 200	C	P		5

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

Example 7: Use of a Special Modification Code.

- A 100' Concrete Feed Bunk with a full length roof and manual mechanical feeder.

OBY CODE	QUAN	YEAR	SIZE	G	COND	RATE	%GD	MOD CODE
701	AF1	01	87	— — 100	A	A		
702	FF1	01	88	— — 100				
703	FF3	01	88	— — 100				

711 MISCELLANEOUS IMPROVEMENTS

Optional RES S8

Enter the OBY Type Code(s), a maximum of three codes may be entered, and the total value of all the MISCELLANEOUS IMPROVEMENTS. The value entered should be the *total depreciated value*

of all the coded improvements. This field is usually used for low cost improvements that are of minimal value.

A maximum amount of \$999,999 of depreciated value is allowed to be entered.

Example 8: Four miscellaneous sheds sound valued at \$50 each.

711 MISCELLANEOUS IMPROVEMENTS RS1 200

800 TOTAL OTHER IMPROVEMENTS

Optional RES S8

This field is used to add or deduct a value from the Total Improvement Value of the parcel. *The value entered should be fully depreciated.* Only the PERCENTAGE OF OWNERSHIP and ECONOMIC CONDITION FACTOR is applied to the value entered.

Enter a narrative description of the value item. One character position is provided for entering a sign (+ or -) to indicate the type of value adjustment. Nine positions are provided to enter up to \$999,999,999 dollars of depreciated value to be added or deducted to the Total Improvement Value of the parcel.

Example 9: Because of its uniqueness, a depreciated value of a golf course is manually calculated at \$650,000 and would be entered as follows:

800 DESCRIPTION: Golf Course [+] TOTAL GROSS VALUE: 650,000

PART 3: DATA COLLECTION

TABLE OF CODES FOR RESIDENTIAL / AGRICULTURAL OTHER BUILDING & YARD IMPROVEMENTS

A. RESIDENTIAL

BOAT HOUSES and DOCKS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
BB1	Frame or Concrete Block	Dim or Sq.ft.	100 SF	5,000 SF
BB2	Masonry	Dim or Sq.ft.	100 SF	5,000 SF
	Allowable Grades:	G, A, L		
BD1	Light wood deck, light posts	Dim or Sq.ft.	15 SF	3,500 SF
BD2	Medium wood deck, wood girders	Dim or Sq.ft.	15 SF	3,500 SF
BD3	Heavy wood deck, heavy pilings	Dim or Sq.ft.	15 SF	3,500 SF

CARPORTS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
RC1	Carport	Dim or Sq.ft.	150 SF	1,000 SF
RC2	Canopy	Dim or Sq.ft.	10 SF	2,500 SF
	Allowable Grades:	3 - 7		
	Modification Codes:	1 - Earth floor 2 - Electricity		

DECKS, PATIOS, TERRACES

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
RT1	Deck, wood	Dim or Sq.ft.	10 SF	1,000 SF
RT2	Deck, concrete	Dim or Sq.ft.	10 SF	1,000 SF
RT3	Deck, stone/tile with sand base	Dim or Sq.ft.	10 SF	1,000 SF
RT4	Deck, stone/tile with concrete base	Dim or Sq.ft.	10 SF	1,000 SF
RT5	Deck, brick	Dim or Sq.ft.	10 SF	1,000 SF
RT6	Masonry Stoop/Terrace	Dim or Sq.ft.	10 SF	1,000 SF
RT7	Patio Covered	Dim or Sq.ft.	10 SF	1,000 SF
RZ1	Gazebo	Dim or Sq.ft.	10 SF	5,000 SF
BQ1	Barbecue, outdoor, brick/stone	Quantity		
	Allowable Grades:	G, A, L		

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

FENCING

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
RF1	Chain Link	Hgt x Ln.ft.	10 SF	20,000 SF
RF2	Picket	Hgt x Ln.ft.	10 SF	20,000 SF
RF3	Stockade	Hgt x Ln.ft.	10 SF	20,000 SF
RF4	Post & Rail	Hgt x Ln.ft.	10 SF	20,000 SF
RF5	Basketweave	Hgt x Ln.ft.	10 SF	20,000 SF
RF6	Brick or Masonry	Hgt x Ln.ft.	10 SF	20,000 SF
RF7	Ornamental Iron	Hgt x Ln.ft.	10 SF	20,000 SF
RF8	Barbed Wire - 4 strand	Hgt x Ln.ft.	10 SF	20,000 SF

NOTE: Gates are to be included in the linear foot measurement.

GARAGES

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
RG1	Garage, detached, frame, finished	Dim or Sq.ft.	150 SF	5,000 SF
RG2	Garage, detached, masonry, finished	Dim or Sq.ft.	150 SF	5,000 SF
RG3	Garage, detached, frame, unfinished	Dim or Sq.ft.	150 SF	5,000 SF
RG4	Garage, detached, masonry, unfinished	Dim or Sq.ft.	150 SF	5,000 SF

Allowable Grades:

1 - 8

Modification Codes:

1 - Earth floor

4 - Heating

2 - No Electricity

5 - Electric door opener

3 - Insulation

GREENHOUSES

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
GH1	Wood frame, plastic covered	Dim or Sq.ft.	20 SF	1,000 SF
GH2	Wood frame, glass walls	Dim or Sq.ft.	20 SF	1,000 SF
GH3	Pipe/Metal frame, glass walls	Dim or Sq.ft.	20 SF	1,000 SF

Allowable Grades:

G, A, L

Modification Code:

1 - Earth Floor

PAVING

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
PA1	Asphalt (Blacktop)	Dim or Sq.ft.	10 SF	9,999 SF
PA2	Concrete	Dim or Sq.ft.	10 SF	9,999 SF

SHEDS and UTILITY BUILDINGS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
RS1	Shed, frame	Dim or Sq.ft.	15 SF	5,000 SF
RS2	Shed, metal	Dim or Sq.ft.	15 SF	5,000 SF
RS3	Shed, masonry	Dim or Sq.ft.	15 SF	5,000 SF

Allowable Grades:

G, A, L

Modification Codes:

1 - Earth floor

4 - Heating

2 - Concrete floor

5 - Electricity

3 - Insulation

PART 3: DATA COLLECTION

SWIMMING POOLS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
RP1	Vinyl-lined	Dim or Sq.ft.	100 SF	5,000 SF
RP2	Fiberglass	Dim or Sq.ft.	100 SF	5,000 SF
RP3	Reinforced Concrete	Dim or Sq.ft.	100 SF	5,000 SF
RP4	Gunite (Sprayed Concrete)	Dim or Sq.ft.	100 SF	5,000 SF

Modification Codes:

1 - No Filter

2 - Gas/Propane Heater

3 - Electric Heater

4 - Solar Heating

5 - Diving Board

6 - Chrome/Steel Ladder

7 - Underwater Lighting

HT1	Hot Tub	Dim or Sq.ft.	10 SF	500 SF
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Allowable Grades:

G, A, L

TENNIS COURTS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
TC1	Asphalt	Quantity	1	3
TC2	Concrete	Quantity	1	3
TC3	Clay	Quantity	1	3

Allowable Grades:

G, A, L

Modification Codes:

1 - Lighting

2 - Fencing

B. AGRICULTURAL

BANK and STANDARD BARNS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AB1	Bank Barn	Dim or Sq.ft.	500 SF	15,000 SF
AB2	Standard Barn	Dim or Sq.ft.	500 SF	15,000 SF

Allowable Grades:

E, G, A, L, C

Modification Codes:

1 - Earth floor

2 - No lighting

3 - Stalls & partitions

4 - Wood loft floor

5 - Gambrel/Arched roof

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

CATTLE FEED BUNKS and FENCE BUNKS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AF1	Concrete feed bunk	Linear feet	5 LF	5,000 LF
AF2	Post & plank bunk	Linear feet	5 LF	5,000 LF
AF3	Concrete fence bunk	Linear feet	5 LF	5,000 LF
AF4	Post & plank fence bunk	Linear feet	5 LF	5,000 LF

Allowable Grades: G, A, L

Special Modification Codes

FF1	Roof, 10' wide	Linear feet	5 LF	500 LF
FF2	Mech feeder, automatic	Linear feet	5 LF	500 LF
FF3	Mech feeder, manual	Linear feet	5 LF	500 LF
FF4	Concrete apron, 10' wide	Linear feet	5 LF	500 LF
FF5	Stock waterer, cattle	Quantity		
FF6	Stock waterer, cattle & hog	Quantity		

FUEL STORAGE TANKS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AU1	Fuel tanks, underground	Gallons	100 GL	10,000 GL
AU2	Fuel tanks, aboveground	Gallons	100 GL	15,000 GL
AU3	Horizontal pressure tank	Gallons	100 GL	10,000 GL

Allowable Grades: G, A, L

GRANARIES

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AR1	Granary	Dim or Sq.ft.	100 SF	5,000 SF

Allowable Grades: G, A, L

Modification Codes:

1 - Wood Storage bin	4 - Wood ventilating duct
2 - Metal wall	5 - No lighting
3 - Metal roof	6 - Pier foundation

HORSE BARN and STABLES

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AD1	Horse Barn or Stable	Dim or Sq.ft.	200 SF	15,000 SF

Allowable Grades: E, G, A, L, C

Modification Codes:

1 - Earth floor	3 - Insulation
2 - No lighting	4 - Heating

IMPLEMENT SHEDS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
A11	Shed, wood frame	Dim or Sq.ft.	200 SF	20,000 SF
A12	Shed, concrete block	Dim or Sq.ft.	200 SF	20,000 SF

Allowable Grades: G, A, L

Modification Codes:

1 - Concrete floor	4 - Heating
2 - No Electricity	5 - Enameled steel
3 - Insulation	

PART 3: DATA COLLECTION

LEAN-TO

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AL1	1-Story lean-to	Dim or Sq.ft.	10 SF	5,000 SF

Allowable Grades:

G, A, L

Modification Codes:

1 - Earth floor

3 - Insulation

2 - Lighting

MILK HOUSES and MILKING PARLORS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AM1	Milk House, Attached, Concrete block	Dim or Sq.ft.	50 SF	2,000 SF
AM2	Milk House, Attached, Glazed tile	Dim or Sq.ft.	50 SF	2,000 SF
AM3	Milk House, Detached, Concrete block	Dim or Sq.ft.	50 SF	2,000 SF
AM4	Milk House, Detached, Glazed tile	Dim or Sq.ft.	50 SF	2,000 SF
AM5	Milking Parlor, Concrete block	Dim or Sq.ft.	50 SF	2,000 SF
AM6	Milking Parlor, Glazed tile	Dim or Sq.ft.	50 SF	2,000 SF

Allowable Grades:

E, G, A, L

Modification Codes:

1 - Metal roof

3 - Composition roof

2 - Wood shingles

4 - No heating

POLE FRAME BUILDINGS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AP1	Four sides closed, metal	Dim or Sq.ft.	200 SF	20,000 SF
AP2	Four sides closed, wood	Dim or Sq.ft.	200 SF	20,000 SF
AP3	One side open, metal	Dim or Sq.ft.	200 SF	20,000 SF
AP4	One side open, wood	Dim or Sq.ft.	200 SF	20,000 SF
AP5	Four sides open, metal	Dim or Sq.ft.	200 SF	20,000 SF
AP6	Four sides open, wood	Dim or Sq.ft.	200 SF	20,000 SF

Allowable Grades:

G, A, L

Modification Codes:

1 - Concrete floor

4 - Wood lining

2 - No electricity

5 - Truss roof, span to 50'

3 - Insulation

6 - Enameled steel

POTATO STORAGE

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AO1	Storage, underground	Dim or Sq.ft.	500 SF	25,000 SF
AO2	Storage, aboveground	Dim or Sq.ft.	500 SF	25,000 SF

Allowable Grades:

G, A, L

Modification Codes:

1 - Concrete floor

3 - Pole frame

2 - No lighting

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

POULTRY HOUSES

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AH1	1-Story frame or metal	Dim or Sq.ft.	50 SF	20,000 SF
AH2	2-Story frame or metal	Dim or Sq.ft.	50 SF	20,000 SF
AH3	3-Story frame or metal	Dim or Sq.ft.	50 SF	20,000 SF
AH4	1-Story concrete block	Dim or Sq.ft.	50 SF	20,000 SF
AH5	2-Story concrete block	Dim or Sq.ft.	50 SF	20,000 SF
AH6	3-Story concrete block	Dim or Sq.ft.	50 SF	20,000 SF

Allowable Grades:

E, G, A, L

Modification Codes:

1 - Earth floor

5 - Single pitch roof

2 - No lighting

6 - Insulation, 1st floor

3 - Wood floor

7 - Insulation, 2nd floor

4 - Heating

8 - Insulation, 3rd floor

PREFABRICATED STEEL BUILDINGS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AX1	Prefab building with vertical walls	Dim or Sq.ft.	200 SF	20,000 SF
AX2	Prefab building with slant walls	Dim or Sq.ft.	200 SF	20,000 SF

Allowable Grades:

G, A, L

Modification Codes:

1 - Earth floor

4 - Heating

2 - No lighting

5 - Grain package

3 - Insulation

6 - Enameled Steel/Aluminum

QUONSET BUILDINGS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AQ1	Quonset building	Dim or Sq.ft.	800 SF	20,000 SF

Allowable Grades:

G, A, L

Modification Codes:

1 - Earth floor

4 - Heating

2 - No lighting

5 - Grain package

3 - Insulation

SCALES

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
CA1	Scales, platform	Capacity	10,000 LBS	80,000 LBS
CA2	Scales, truck	Capacity	10,000 LBS	80,000 LBS
CA3	Scales, cattle	Capacity	10,000 LBS	80,000 LBS

PART 3: DATA COLLECTION

SILOS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AS1	Conc stave, with roof	Diam x Hgt	1,500 BU	75,000 BU
AS2	Conc stave, without roof	Diam x Hgt	1,500 BU	75,000 BU
AS3	Butler LMS silo (low moisture silo)	Diam x Hgt	1,500 BU	100,000 BU
AS4	Porcelain silo	Diam x Hgt	3,000 BU	200,000 BU
AS5	Prefabricated steel silo	Diam x Hgt	1,500 BU	100,000 BU
AS6	Prefabricated steel, high moisture	Diam x Hgt	1,500 BU	100,000 BU

Modification Codes:

1 - 17' auto unloader

2 - 20' auto unloader

3 - 25' auto unloader

4 - 17' raised arm auger

5 - 20' raised arm auger

6 - 25' raised arm auger

AK1	Bunker silo	Hgt x LF	10 SF	3,000 SF
-----	-------------	----------	-------	----------

Allowable Grades:

G, A, L

AT1	Trench, conc or plank	Depth x LF	10 LF	3,000 LF
AT2	Trench, dirt	Depth x LF	10 LF	3,000 LF

Modification Codes:

1 - 20 ft. wide

2 - 40 ft. wide

3 - 50 ft. wide

4 - 60 ft. wide

5 - 80 ft. wide

SLURRY SYSTEMS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AY1	Circular system	Gallons	20,000	500,000
AY2	Rectangular system	Gallons	20,000	500,000

Allowable Grades:

A

STEEL BINS

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AG1	Grain bins, with out drying bin	Diam x Hgt	500 BU	275,000 BU
AG2	Grain bins, with drying bin	Diam x Hgt	500 BU	275,000 BU
AG3	Steel hopper bins	Diam x Hgt	400 BU	275,000 BU

Allowable Grades:

G, A, L

33. RESIDENTIAL & AGRICULTURAL IMPROVEMENTS

SWINE BARNs

CODE	DESCRIPTION	MEASUREMENT	MINIMUM	MAXIMUM
AW1	Swine farrowing barn	Dim or Sq.ft.	200 SF	20,000 SF
AW2	Swine finishing barn	Dim or Sq.ft.	200 SF	20,000 SF
AW3	Swine confinement barn	Dim or Sq.ft.	200 SF	20,000 SF

Allowable Grades:

E, G, A, L, C

Modification Codes:

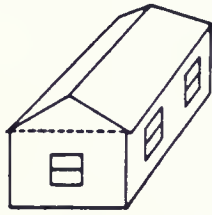
1 - 25% conc pit area

2 - 100% conc pit area

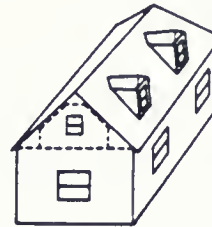
Special Modification Codes

FW1	Wood Pens	Linear feet
FW2	Steel Pens	Linear feet
FW3	Fans	Quantity
FW4	Waterers	Quantity
FW5	Feeders	Linear feet
FW6	Stalls	Quantity

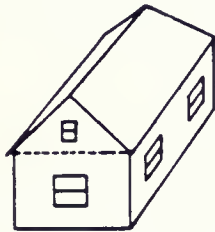
A33.1. STORY HEIGHT ILLUSTRATIONS



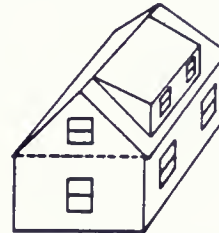
1 Story: All rooms are on one floor and are below the square of house at the eave line. This design usually has a low pitch roof with a slope of about $1/6$.



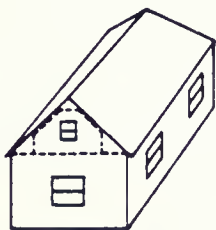
1 Story and Finished Attic with Wall Height: Same basic design as one story and finished attic, except for the addition of two or three small dormers. The usable attic floor area is about 55 % of the first floor area.



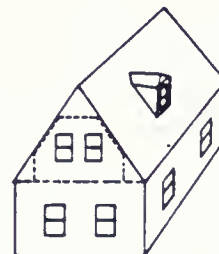
1 Story and Attic: Same basic design as 1 Story, except the pitch of the roof is usually greater, with a slope of about $1/4$ or $1/3$. This design has a permanent stairway to a usable, floored attic area which is approximately 20% of the first floor area. There are usually windows at each end of the attic.



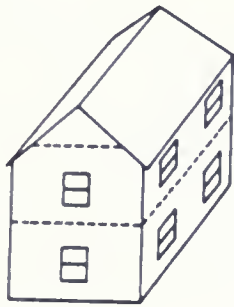
1½ Story: This design is similar to 1 Story and Finished Attic, except that the roof pitch is greater - with a slope of about $1/3$ or $1/2$ - and there is a large dormer on one side of the roof and possibly one or two small dormers on the opposite side of the roof. Area of the finished second floor is approximately 75% of the first floor area.



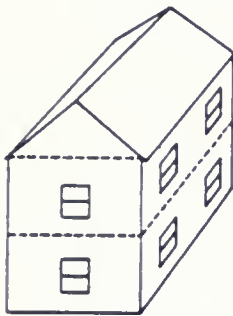
1 Story and Finished Attic: Same basic design as 1 Story and Attic, except the attic interior is finished and is usually divided into rooms. The attic floor area is approximately 40% of the first floor area.



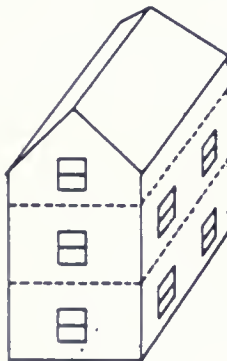
1½ Story: This design has a high pitch roof with a slope of about $5/8$ or $3/4$, and small dormers on one or both sides of the roof. The area of the finished second floor is approximately 75% of the first floor area.



2 Story: This is a typical two story dwelling, with the second floor area equal to the first floor area.



2 Story: Similar to the other 2 Story example, except that the second floor side walls are less than full height. Consequently, part of the second floor ceiling follows the slope of the roof.



2½ Story: This design has two full stories and a half story similar to any of the three 1½ Story examples.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES

BI-LEVEL

**BI-LEVEL - (SPLIT FOYER, SPLIT ENTRY, RAISED RANCH, HILLSIDE RANCH, PENTHOUSE)**

A contemporary one story house which provides (or has the potential to be finished to provide) two levels of living area. The lower level is either a raised ("true" or "English") basement which protrudes about four feet above grade or a "walkout" type basement which has one side exposed at grade level when the house is built into a hillside. The Split Foyer or Split Entry has the front door at ground level halfway between the raised basement and first floor. The Raised Ranch or Hillside Ranch typically incorporates a basement garage and/or a "walkout" recreation room on the lower level. The Penthouse has the main entrance located on the basement level.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

SPLIT LEVEL



SPLIT LEVEL (TRI-LEVEL, SIDE-TO-SIDE SPLIT, FRONT-TO-BACK SPLIT, BACK-TO-FRONT SPLIT)
A contemporary house with three basic living levels (not counting a basement, if present). Typically, the room layout consists of a garage and/or recreation room on the lower level, with the living room about a half flight of stairs up on the middle level. The bedrooms are located on the upper level over the recreation room or garage.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

RANCH



RANCH (RAMBLER, TRUE RANCH, CALIFORNIA RANCH) A contemporary one story house with all habitable rooms and automobile storage located on one level. If a basement is present, it is typically a utility or storage type.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

MODERN



MODERN (ULTRA-MODERN, POST-MODERN) Houses which are innovative or unique in design, use of construction methods or materials. These are typically architect designed and built homes which belong in a class by themselves. If it can be identified, the specific style should be recorded in the NOTES section. Early 20th century architectural movements in this category include the Prairie, International, Art Deco, Art Moderne, and Miesian schools. Contemporary examples in this class would also include products of recent movements such as Brutalism, High Tech, Post Modern, and International Revival.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

TRADITIONAL or
VICTORIAN

TRADITIONAL or VICTORIAN (GOTHIC REVIVAL, CARPENTER GOTHIC, ITALIANE, OCTAGON, RENAISSANCE REVIVAL, STICK, SECOND EMPIRE, HIGH VICTORIAN GOTHIC, QUEEN ANNE, EASTLAKE, RICHARDSON ROMANESQUE, SHINGLE) A rich and expressive architectural period which began around 1840 and continued to 1900. This style of dwelling is typified by asymmetrical shapes and silhouettes, often with steep intersecting gable roofs, towers, dormers and bay windows. Vertical emphasis is provided by the use of tall chimneys and turrets. Complicated scrollwork (gingerbread) and elaborate turned trimmings are prevalent items of decor.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

EARLY AMERICAN



EARLY AMERICAN (COLONIAL, GARRISON COLONIAL, SALTBOX, GEORGIAN, FEDERAL, DUTCH COLONIAL, SOUTHERN COLONIAL, JEFFERSONIAN, GREEK REVIVAL, GEORGIAN REVIVAL, COLONIAL REVIVAL) Almost all pre-Civil War American architecture is generally classified as a type of Colonial. This catch-all grouping includes true period homes and contemporary replicas. Although elements of this style are a major component of today's contemporary-traditional vernacular, only historically accurate examples belong in this category. Thus, most newer homes which contain only traces or idiosyncrasies of colonial architecture would not fall in this category.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

EARTH SHELTERED



EARTH SHELTERED (UNDERGROUND) A contemporary house built below ground level or into a hillside. The roof is covered with earth except for skylights, a clerestory window, or possibly an atrium.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

CONVENTIONAL



CONVENTIONAL (CONTEMPORARY, FUNCTIONAL MODERN) Contemporary one to three story houses with conservative architecture in the 20th century vernacular mode. These houses may incorporate elements of Traditional, Spanish, Colonial, Elizabethan, or period designs, but they are not true replicas.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

BUNGALOW

**BUNGALOW (CALIFORNIA BUNGALOW, AIRPLANE BUNGALOW, CRAFTSMAN BUNGALOW)**

A picturesque cottage-like house introduced around 1900 and very popular through the 1930's. The informal plan, elevation, and detail featured low simple lines, a wide projective gable roof, large porches, a walk-way stoop, and rough natural construction materials. Typically a one story residence, however, one and one-half story versions may incorporate a low shed dormer. The Airplane Bungalow has a small two story addition in the rear.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

OLD STYLE



OLD STYLE (TRI-GABLE ELL, UTILITARIAN COTTAGE, AMERICAN FOURSQUARE, FARMHOUSE, PRINCESS ANNE, SHIRTWAIST) Mid 19th century and early 20th century pattern book vernacular style houses which are transitions from the Victorian era or provincial examples of Georgian revivals or picturesque English style period homes.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

LOG



LOG This category has exterior walls built of logs, either in round or squared shape.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

CONDOMINIUM



CONDOMINIUM This category identifies a distinct type of ownership. The unit living area is owned exclusively (fee simple) by the unit owner. The other components; land, common hallways, stairways, roof, foundation, and exterior recreation features, such as pools, tennis courts, etc., are owned in common by all unit owners. They may be townhouse, hi-rise, or garden apartment in style.

A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

A-FRAME



A-FRAME This category has a frame in the shape of one or more "A's". A-Frames have very steep gable roofs, front and rear walls usually have large glass areas. A-Frames have been popular since WWII.

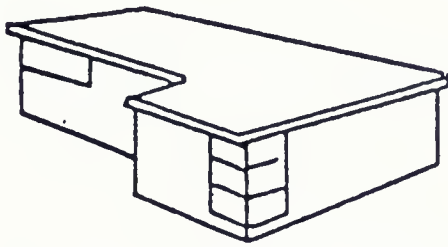
A33.2. RESIDENTIAL ARCHITECTURAL STYLES (Cont'd)

OTHER

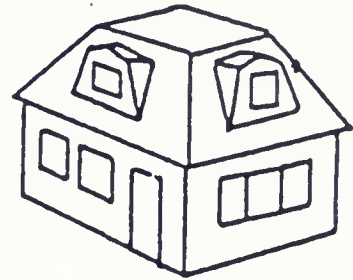


OTHER (SHANTY, BASEMENT FOUNDATION HOME, SOD, QUONSET HUT, GEODESIC DOME, PREFABRICATED DYMATION, CONVERTED BARN, FANTASY, FREEFORM, SILO/YURT KIT HOMES, PREFABRICATED MODULAR) Truly unique or rare architectural examples which do not fall into any previously mentioned categories can be indicated as Other. If using this entry, enter a description of the STYLE in the NOTES field.

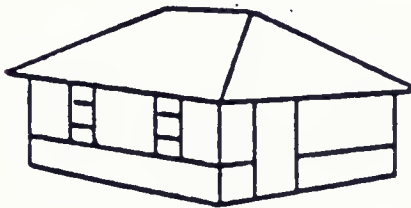
A33.3. ROOF TYPE ILLUSTRATIONS



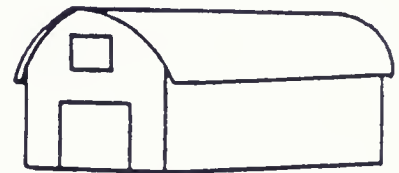
FLAT



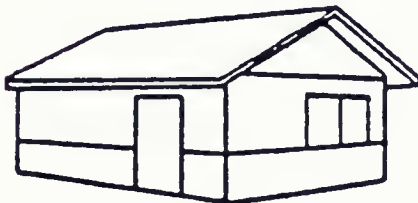
MANSARD



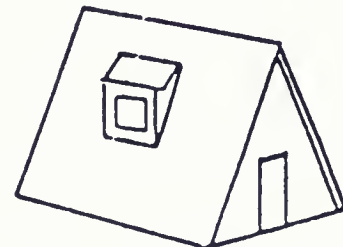
HIP



ARCHED



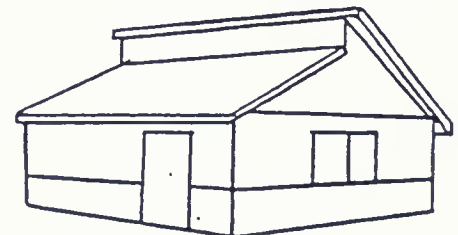
GABLE



A - FRAME



GAMBREL



BROKEN GABLE

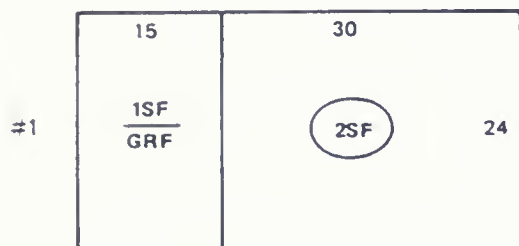


SHED

A33.4. BUILT-IN GARAGE EXAMPLES

EXAMPLE NO. 1

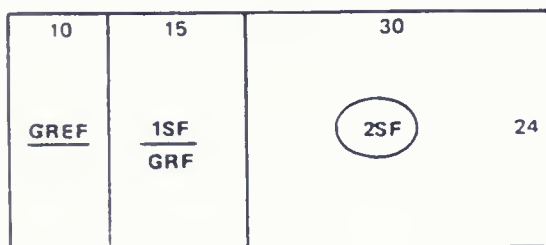
A one-car garage built into a 2-story frame house. The garage is built under the upper floor living area.



ADDITIONS						
ADD	CD	LWR	1ST	2ND	3RD	AREA
601-A	A1		19	10		
602-B	A2					

EXAMPLE NO. 2

A two-car garage built into the ground floor area of a 2-story frame house and extending beyond the upper floor area.



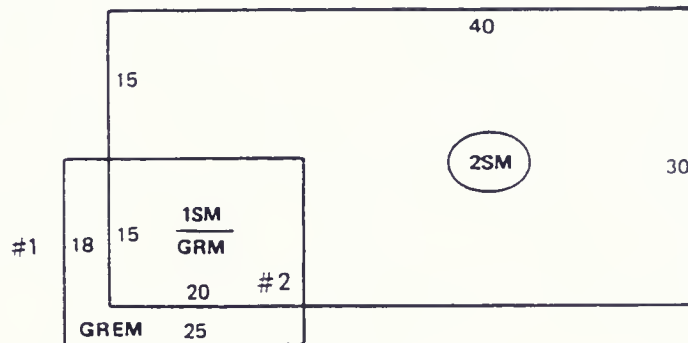
ADDITIONS						
ADD	CD	LWR	1ST	2ND	3RD	AREA
601-A	A1		19	10		
602-B	A2		31			

NOTE: The garage extension code is used for the portion of the garage which extends beyond the main dwelling to avoid doubling up on fixed costs associated with the garage structure.

A33.4. BUILT-IN GARAGE EXAMPLES (Cont'd)

EXAMPLE NO. 3

A two-car garage built partially into a two-story masonry house. The garage is built under upper floor living area and has living area to the rear of it.



ADDITIONS						
ADD	CD	LWR	1ST	2ND	3RD	AREA
601-A	A1		41			
602-B	A2		29	20		

A33.5. PERCENT COMPLETE TABLE

The following percentages indicate approximate portions of the total cost of an average home. They are listed in order of usual construction. The percentages are expressed as a whole number.

DESCRIPTION		WITH BASEMENT	WITHOUT BASEMENT
1	Excavation: footings, foundation basement, columns	11	8
2	Joist, subfloor, floor	3	3
3	Wall framing (thru top plates)	7	7
4	Wall sheathing	4	4
5	Roof framing, ceiling joists, sheathing felt	8	9
6	Roof cover	3	3
7	Exterior Felt, Siding, exterior trim, porches, etc.	7	7
8	Windows, exterior doors	8	9
9	Exterior prime and paint	3	3
10	Plumbing - roughed in	4	5
11	Electric - roughed in	2	2
12	Heating - roughed in	1	1
13	Insulation, walls & ceiling	1	1
14	Dry wall or plaster	7	7
15	Interior carpentry	5	5
16	Interior finish: paint, trim, wallcover	4	4
17	Floor covering	4	4
18	Cabinets & countertops	4	4
19	Plumbing - finish	7	7
20	Electric - finish	1	1
21	Mechanical/Heating - finish	5	5
22	Finish hardware	1	1
TOTAL		100%	100%

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

TABLE OF CONTENTS

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
599	DELETE: COMMERCIAL BUILDING	1	800	TOTAL OTHER IMPROVEMENTS	20
600	GENERAL BUILDING DATA	3	812	PERCENT COMPLETE	24
601-608	BUILDING OTHER FEATURES -		820	MODEL ADJUSTMENTS	24
	ATTACHED IMPROVEMENTS	6	825	OCCUPANCY OVERRIDE	24
611-618	EXTERIOR DATA	10	830	VALUATION METHOD	24
621-628	INTERIOR DATA	15	835	INCOME YEAR OVERRIDE	25
631-638	APARTMENT DATA	19	965	REVIEWER REASON CODE	25
639	PARKING DATA	19	868	GENERAL OWNERSHIP	25
699	DELETE: COMMERCIAL OBY	19	869	LIMITED OWNERSHIP	25
701-706	OTHER BUILDING & YARD IMPROVEMENTS	19			

CONTENT OF DATA FIELDS

All of the data specifically for Commercial and Industrial improvements is contained in six screens. The following list shows the fields in numerical order and describes the data requirements for them. It also shows the number of the screen that contains the field.

There are five distinct divisions to be completed to properly enter the characteristics for a Commercial/Industrial parcel.

- General Building Data
- Building Other Features - Attached Improvements
- Exterior/Interior Data
- Yard Improvements and Secondary Buildings
- Valuation Override Fields

A Commercial/Industrial building is divided into sections. Building sections are separated due to differing story height or due to major differences in type and quality of construction. A section can share a common wall or part of a common wall with another section or several sections, but otherwise could stand alone as a separate building.

Building sections are divided into Exterior/Interior lines. An Exterior/Interior line is defined as that portion of a building section having all identical characteristics (except From - To) found on an Exterior/Interior Data line. In other words, an Exterior/Interior line consists of those stories in a building section that have the following identical characteristics:

- Dimensions (width x length or square feet)
- Perimeter
- Use Type Code
- Wall Height
- Exterior Wall Material
- Construction Type
- Interior Finish Percent
- Partitions
- Heating System Type
- Air Conditioning Type
- Plumbing
- Physical Condition
- Functional Utility

599 DELETE: COMMERCIAL BUILDING Optional COM GPD

This is a computer file maintenance entry and normally will not be utilized on the field card. The purpose of the delete is to remove all data previously entered in the computer for Commercial fields 600-628. This function is initiated by selecting option "06" from the On-Line Menu of the Commercial subsystem.

SAMPLE PROPERTY RECORD CARD
(Back of Commercial Card)

[illegible]

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

600 GENERAL BUILDING DATA COM S5

Required entry for building.

The information for the GENERAL BUILDING DATA fields must be completed for every major building structure type. Every sub-field is a required entry if a building is listed.

BUILDING NUMBER - Enter a 2-digit number denoting the "building number" being described. BUILDING NUMBERS should begin with 01, and be sequentially assigned. The BUILDING NUMBER is a descriptive field to aid in the identification of individual buildings on a multi-building parcel.

YEAR BUILT - Enter the year in which the building listed was built. If the owner or tenant does not know the actual year, enter your best estimate possible, based on known years of similar properties in the immediate locality. A year built MUST be entered for each structure.

YEAR REMODELED - Enter the last two digits of the year remodeled. This information is descriptive only. Adjustments to depreciation are affected only through the use of the EFFECTIVE YEAR field.

EFFECTIVE YEAR - Enter the effective year to be used as an override to the year built in determining the "percent good" depreciation factor for the building listed.

NUMBER OF UNITS - Enter the number of measurable units applicable for the building structure coded. The following are examples of BUILDING STRUCTURE TYPES and the types of UNITS to be counted.

Struc. Type Code	Struc. Type	Measurable Units
211	Apartment, Garden	Number of Living Units
212	Apartment, High Rise	Number of Living Units
314	Hotel/Motel, High Rise	Number of Rooms
315	Hotel/Motel, Low Rise	Number of Rooms
316	Nursing Home	Number of Beds
318	Boarding/Rooming House	Number of Rooms
336	Car Wash, Manual	Number of Bays

Struc. Type Code	Struc. Type	Measurable Units
337	Car Wash, Automatic	Number of Bays
338	Parking Garage/Deck	Number of Cars
364	Motion Picture Theatre	Number of Seats
381	Bowling Alley	Number of Lanes
385	Tennis Club, Indoor	Number of Courts
386	Racquet Club, Indoor	Number of Courts
396	Mini Warehouse	Number of Rentable Units
640	Hospital	Number of Beds

NOTE: For apartments and motels, the number of units will be used in selecting and applying the appropriate building area cost computations.

STRUCTURE TYPE CODE - Enter the code which describes the purpose of the building as a whole. See the following pages for a table of the three-digit numeric codes which should be used.

NOTE: When a building section has been constructed for multiple purposes, use the STRUCTURE TYPE CODE that describes the predominate use of the building section.

GRADE - Enter the appropriate GRADE of the Structure. A plus (+) or a minus (-) sign, denoting a deviation from the base GRADE but still considered within the overall range of the GRADE, may be entered following the GRADE.

<u>Grade</u>	<u>Description</u>
L	LOW COST
F	FAIR
A	AVERAGE
G	GOOD
V	VERY GOOD
E	EXCELLENT

NUMBER OF IDENTICAL UNITS - Enter the total number of identical building units. The characteristics of each building, including Exterior/Interior lines and Building Other Features, must be exactly identical.

TABLE OF STRUCTURE TYPE CODES

RESIDENTIAL

<u>Living Oriented</u>		<u>Apartments</u>	
Residential, One Family	101	Apartment, Garden (3 story & less)	211
Residential, Two Family	102	Apartment, High Rise	212
Residential, Three Family	103	Townhouse/Rowhouse	213
Residential, Four Family	104		
Mixed Res/Comm (built as Residential)	105		
Condominium (common element)	106		
Condominium (fee simple)	107		
Condominium (time share)	108		

COMMERCIAL

<u>Accommodations</u>		<u>Retail</u>	
Hotel/Motel, High Rise (5 stories and up)	314	Super Regional Shopping Mall	340
Hotel/Motel, Low Rise (1 to 4 stories)	315	Regional Shopping Mall	341
Nursing Home	316	Community Shopping Center	342
Boarding or Rooming House	318	Neighborhood Shopping Center	343
Mixed Res/Comm (built as Commercial)	319	Strip Shopping Center	344
		Discount Department Store	345
		Department Store	346
		Supermarket	347
		Convenience Food Market	348
<u>Food and Beverage</u>		<u>Office/Bank</u>	
Restaurant	321	Medical Office Building	349
Fast Food	325	Drive-up Bank	350
Bar or Lounge	327	Bank	351
Night Club/Dinner Theatre	328	Savings Institution	352
<u>Automobile Oriented</u>		Office Building, Low Rise (1 to 4 stories)	353
Auto Dealer, Full Service	331	Office Building, High Rise (5 stories and up)	354
Auto/Equipment Service Garage	332	Office Condominium	355
Service Station (full service)	333	Retail Condominium	356
Service Station (self service)	334		
Truck Stop	335		
Car Wash (manual)	336		
Car Wash (automatic)	337		
Parking Garage/Deck	338		
		<u>Miscellaneous</u>	
		Funeral Home	361
		Veterinary Clinic	362
		Legitimate Theatre	363
		Motion Picture Theatre	364
		Cinema/Theatre	365
		Social or Fraternal Hall	367
		Hangar	368
		Day Care Center	369

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

TABLE OF STRUCTURE TYPE CODES (Cont'd)

COMMERCIAL (Cont'd)

<u>Multi-Purpose</u>		<u>Sport and Health</u>	
Downtown Row Type	371	Bowling Alley	381
Retail - Single Occupancy	373	Skating Rink	382
Retail - Multi Occupancy	374	Health Spa	383
Retail - Drive-Up	375	Swimming Pool, Indoor	384
		Tennis Club, Indoor	385
		Racquet Club, Indoor	386
		Country Club	387
		Club House	388
		Country Club with Golf Course	389
<u>Storage</u>			
Cold Storage Facility	391		
Lumber Storage	392		
Truck Terminal	395		
Mini Warehouse	396		
Office/Warehouse	397		
Warehouse	398		
Warehouse, Prefab	399		

INDUSTRIAL

Manufacturing & Processing	401	Research & Development	405
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INSTITUTIONAL and SPECIAL PURPOSE BUILDINGS

<u>Recreational & Health</u>		<u>Communication</u>	
Library	610	Telephone Equip Building	710
School	611	Telephone Service Garage	715
College or University	612	Radio/TV Transmit Building	720
Dormitories	613	Radio, TV or Motion Picture Studio	725
Churches	614		
Auditorium	620		
Hospital	640		
Post Office	650		
Police or Fire Station	660		
Correctional Facilities	670		
Cultural Facility	680		
Rail/Bus/Air Terminal	690		

PART 3: DATA COLLECTION

601-608 BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS

Optional

COM S5

There are numerous types of BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS which may be encountered on commercial and industrial properties. The most common of these have been provided for. The inclusion of all possible items is considered impractical, however, the ability to collect data on uncoded items has been provided for. In this situation the data collector should enter the BOF code MS1 (miscellaneous structure) and enter a flat dollar amount in the measurement 1 column.

LINE NUMBER - Enter the number (1 to 8) denoting the "Exterior/Interior line number" where the BUILDING OTHER FEATURE being described is located. The Exterior/Interior line number equates to the following field code numbers.

1 = 611 3 = 613 5 = 615 7 = 617
2 = 612 4 = 614 6 = 616 8 = 618

NOTE: It is extremely important to enter the correct Exterior/Interior line number in which the BUILDING OTHER FEATURE is located because the BOF will be depreciated in the same manner as

the Exterior/Interior line. For the following BOF's the Exterior/Interior line number should always correspond with the first floor of the building section:

All Elevators
All Escalators
All Store Fronts

BOF CODES - Enter the code that best describes the type of BUILDING OTHER FEATURE being described. See the *Table of Codes and Measurements for Building Other Features and Attached Improvements*.

FLAT VALUE (+ or -) - Space is provided to enter a plus (+) or minus (-) sign to denote the addition or deduction of a flat dollar amount which would then be entered in the Measurement 1 column. If the flat value field is not utilized, this entry must be left blank.

MEASUREMENT 1/MEASUREMENT 2 - Space is provided to enter the appropriate measurements of the structure code being described. Use the character positions to the right.

NUMBER IDENTICAL UNITS - Enter the total number of identical BOF's.

TABLE OF CODES AND MEASUREMENTS FOR
BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS

BOF Description	Code	Measure 1	Measure 2	# Units
Air Conditioning, central	AC1	Sq.ft.	1	
Air Conditioning, unit	AC2	-----	-----	Each
Aerial Walkway	AW1	Width	Length	
Atrium, cover only	AT1	Width	Length	
Atrium, walls	AT2	Ln.ft.	Height	
Balcony	BA1	Width	Length	
Bank Drive-In, canopy	BC1	Width	Length	
Bank Drive-In, teller booth	BC2	Width	Length	
Bank Drive-In, window	BC3	-----	-----	Each
Bank Night Deposit Chute	BE6	-----	-----	Each
Bank Pneumatic Tubes	BE0	Ln.ft.	1	
Bank Service Window	BE8	-----	-----	Each

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

**TABLE OF CODES AND MEASUREMENTS FOR
BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS (Cont'd)**

BOF Description	Code	Measure 1	Measure 2	# Units
Bank Vault, money, no door	BE1	Width	Length	
Bank Vault, record storage, no door	BE2	Width	Length	
Bank Vault Door, money, circular shape	BE3	----	-----	Each
Bank Vault Door, money, rectangular shape	BE4	----	-----	Each
Bank Vault Door, record storage only	BE5	----	-----	Each
Basement Top	BT1	Width	Length	
Built-In	BI1[1]	Value	1	
Cooler, chiller	CF1	Sq.ft.	1	
Cooler, freezer	CF2	Sq.ft.	1	
Cooler, sharp freeze	CF3	Sq.ft.	1	
Canopy Roof, low cost	CP5	Width	Length	
Canopy Roof, average	CP6	Width	Length	
Canopy Roof, good	CP7	Width	Length	
Computer Room Floor	CR1	Width	Length	
Computer Room Air Control	CR2	Width	Length	
Computer Room Fire Suppression Equipment	CR3	Width	Length	
Carport	RC1	Width	Length	
Covered Mall	CM1	Width	Length	
Craneways	CW1	Length	-----	
Dock Level Floor	DH1	Width	Length	
Elevator - Electric Freight	EL1	Capacity[2]	Stop/Speed[3]	Each
Elevator - Electric Passenger	EL2	Capacity	Stop/Speed	Each
Elevator - Hydraulic Freight	EL3	Capacity	Stop/Speed	Each
Elevator - Hydraulic Passenger	EL4	Capacity	Stop/Speed	Each
Escalator, stair width 32"	EL5	Ft Rise[4]	1	Each
Escalator, stair width 48"	EL6	Ft Rise	1	Each
Enclosed Entry	EE1	Width	Length	
Fireplace with 1 opening	FI1	----	-----	Each
Fireplace with 2 openings	FI2	----	-----	Each
Fireplace with 3 openings	FI3	----	-----	Each

[1] FLAT VALUE (+/-) must be entered.

[2] Elevator Capacity - enter capacity in pounds.

[3] Elevator Stop/Speed - enter the number of stops in the first 2 positions and the speed (ft/min) in the last 4 positions of Measure #2.

[4] Escalators - enter the distance, in feet, between floors in Measure #1.

PART 3: DATA COLLECTION

TABLE OF CODES AND MEASUREMENTS FOR
BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS (Cont'd)

BOF Description	Code	Measure 1	Measure 2	# Units
Garage, attached, frame, fin	RA1	Width	Length	
Garage, attached, masonry, fin	RA2	Width	Length	
Garage, attached, frame, unfin	RA3	Width	Length	
Garage, attached, masonry, unfin	RA4	Width	Length	
Greenhouse, economy, wood frame, plastic covering	GH1	Width	Length	
Greenhouse, average, wood frame, glass walls	GH2	Width	Length	
Greenhouse, good, pipe/metal frame, glass walls	GH3	Width	Length	
Hoists, single plunger	HS1	-----	-----	Each
Hoists, double plunger	HS2	-----	-----	Each
Loading Dock, steel/concrete	LD1	Width	Length	
Loading Dock, wood	LD2	Width	Length	
Loading Dock, interior	LD3	Width	Length	
Truck and Train Wells	LD4	Width	Length	
Dock Levelers	LD5	-----	-----	Each
Miscellaneous Structure	MS1[5]	Flat Value	-----	
Open Areas, high rise apts & hotels	OA1	Width	Length	
Open Areas, garden apts, motels, and dwellings	OA2	Width	Length	
Open Areas, stores & restaurants	OA3	Width	Length	
Open Areas, industrial & warehouses	OA4	Width	Length	
Open Areas, bank & office buildings - low rise	OA5	Width	Length	
Open Areas, theaters & auditoriums	OA6	Width	Length	
Open Areas, light metal buildings	OA7	Width	Length	
Open Areas, office (high rise)	OA8	Width	Length	
Overhead Doors, wood/metal	OD1	Width	Height	Each
Overhead Doors, rolling steel	OD2	Width	Height	Each
Overhead Doors, wood/metal with motor and operator	OD3	Width	Height	Each
Overhead Doors, roll steel with motor and operator	OD4	Width	Height	Each
Patio, wood	RT1	Width	Length	
Patio, concrete	RT2	Width	Length	
Patio, stone or tile, sand base	RT3	Width	Length	
Patio, stone or tile, concrete base	RT4	Width	Length	
Patio, brick	RT5	Width	Length	
Patio, masonry stoop	RT6	Width	Length	

[5] FLAT VALUE (+/-) must be entered.

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

TABLE OF CODES AND MEASUREMENTS FOR
BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS (Cont'd)

BOF Description	Code	Measure 1	Measure 2	# Units
Porch, open	PP1	Width	Length	
Porch, screened	PP2	Width	Length	
Porch, enclosed	PP4	Width	Length	
Porch, open, upper deck	PP5	Width	Length	
Porch, screened, upper deck	PP6	Width	Length	
Porch, enclosed, upper deck	PP8	Width	Length	
Roof, monitor	MR1[6]	Ln.ft.	Height	
Roof, high bay	MR2	Ln.ft.	Height	
Skating Rink, indoor, ice skating	SK1	Width	Length	
Sprinkler System, wet pipe	SS1	Sq.ft.	1	
Sprinkler System, dry pipe	SS2	Sq.ft.	1	
Store Front, wood frame	SF1	Length	1	
Store Front, avg metal frame	SF2	Length	1	
Store Front, elaborate	SF3	Length	1	
Swimming Pool, indoor	RP5	Width	Length	
Tunnel	TU1	Width	Length	
Utility Building, frame	RS1	Width	Length	
Utility Building, metal	RS2	Width	Length	
Utility Building, brick/stone	RS3	Width	Length	

[6] Roof - LINE NUMBER must be for floor levels 01 to 01.

PART 3: DATA COLLECTION

611-618 EXTERIOR DATA COM S6

Required entry for building - *at least one line, field codes 611 and 621, is required.*

In describing the various positions of a Building Section, a concept of Exterior/Interior lines is needed. Please review the introductory paragraphs of this Section for a discussion on Building Sections and Exterior/Interior Lines.

SECTION NUMBER - Enter a one-digit number denoting the section of the building being described. **SECTION NUMBERS** are only descriptive. They should begin with 1 and continue in sequential order.

LEVEL (FROM) - Enter the code that describes the "first" level of the Exterior/Interior line. This field is used in conjunction with the next field, **LEVEL (TO)**, to describe the level(s) or floor(s) of the Exterior/Interior line being coded.

- A1 to indicate attic.
- B1 to indicate first basement.
- B2 to indicate sub-basement (up to B9 available).
- C1 to indicate first crawl space.
- E1 to indicate enclosure (up to E9 available).
- M1 to indicate mezzanines (balcony) (up to M9 available).
- P1 to indicate penthouses (up to P3 available).
- 01 to indicate first story.
- 02 to indicate second story.

LEVEL (TO) - Enter the code that describes the "last" level of the Exterior/Interior line. This field is used in conjunction with the previous field, **LEVEL (FROM)**, to describe the level(s) or floor(s) of the Exterior/Interior line being coded.

NOTE 1: When making entries to the FROM and TO fields, do not mix codes.

NOTE 2: The numeric characters used with crawl space, mezzanines, attics, penthouses, and enclosures are for identification, not to indicate the floor or level where each item is located. For instance, if two enclosures were to be described on the first floor, they would be designated E1 to E1 and E2 to E2. Renumbering should begin when going to another floor.

NOTE 3: Mezzanine and enclosure entries should follow the listing of the floor they are on. That is, if there is a mezzanine located on the first floor of a building, the mezzanine should be coded on the next line following (underneath) the first floor.

NOTE 4: Penthouses should follow the top floor.

NOTE 5: Attic level entries should follow the highest floor level, including Penthouses.

NOTE 6: The first floor must always be entered as a separate line entry (01 to 01).

The following are examples of acceptable entries:

- 1 To describe floors 2 through 9 of a building:
LEVEL FROM: 02 TO: 09
- 2 To describe a basement and an identical sub-basement:
LEVEL FROM: B1 TO: B2
- 3 To describe the first floor of a building, the first floor of a building must always be a separate entry:
LEVEL FROM: 01 TO: 01
- 4 To describe a mezzanine:
LEVEL FROM: M1 TO: M1
- 5 To describe a penthouse:
LEVEL FROM: P1 TO: P1

The following are examples of unacceptable entries:

These entries are not only confusing, but would not form unique Exterior/Interior lines. They are not to be used.

- 1 This entry creates the question, "Is there a sub-basement?"
LEVEL FROM: B2 TO: 01
- 2 This entry creates the question, "Is there a second story, third story, etc.?"
LEVEL FROM: 01 TO: M1
- 3 This entry creates the question, "How many floors are there in between?"
LEVEL FROM: B1 TO: P1

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

4 This entry does not enter the first floor as a separate line entry (01 to 01).

LEVEL FROM: 01 TO: 03

DIMENSION - SIZE - Enter either the dimensions (width and length) or the square foot area of the level being described.

To enter the dimensions, character positions are provided for eight characters: three numeric characters denoting the width, one multiplication (X) symbol, and four numeric characters denoting the length. The multiplication symbol must always be entered in the fourth character position from the left (within the two vertical hash marks).

To enter the square foot area, character positions are provided to enter eight numeric characters (up to 99,999,999 square feet).

NOTE 1: Do not enter the total square footage area for all stories of the Exterior/Interior line.

NOTE 2: Use 75% of the first floor area for 1 1/2 story buildings.

DIMENSION - PERIMETER - Enter the effective perimeter of the Exterior/Interior line of the building section being described. Enter the sum of all exterior wall measurements around the base of the Exterior/Interior line to the nearest foot.

NOTE 1: When a common wall separates two Building Sections, include the length of the common wall with that section which corresponds to the height of the wall. If both sections are the same height, include the common wall with either one of the two sections, but not both.

NOTE 2: When a common wall separates a building from an adjacent parcel under a different ownership, include the length of the common wall times 60% for both parcels to calculate effective perimeter.

NOTE 3: When an open area separates two Building Sections, do not use this open area in calculating the effective perimeter.

USE TYPE - Enter the USE TYPE code describing the current use of the Exterior/Interior line.

NOTE 1: The USE TYPE may differ from the STRUCTURE TYPE.

NOTE 2: The USE TYPE for crawl space will always be "000" - None.

USE TYPE CODES

011	Apartment	054	Nursing Home
012	Hotel	055	School
013	Motel	056	Hospital
		057	Library
021	Dormitory	058	Funeral Home
		059	Post Office
024	Dwelling Conversion - Multiple	061	Auditorium or Theatre
025	Dwelling Conversion - Office	062	Cinema
026	Dwelling Conversion - Sales		
027	Dwelling	063	Religious Institution
		064	Social or Fraternal Hall
030	Laundromat or Dry Cleaners		
031	Restaurant	070	Service Station with Bays
		071	Service Station - Conversion Retail
032	Department Store	072	Service Station - Conversion Storage
033	Discount Store/Market	073	Service Station without Bays
034	Retail Store		
		074	Car Wash - Manual
035	Tavern or Bar	075	Car Wash - Automatic
036	Lounge		
037	Cafeteria	081	Multi-Use - Apartment
038	Convenience Store	082	Multi-Use - Office
039	Dairy Sales	083	Multi-Use - Sales
040	Barber or Beauty Shop	084	Multi-Use - Storage
041	Mini Warehouse	085	Enclosure
042	Hangar	086	Support Area
043	Manufacturing		
044	Light Manufacturing	088	Restroom/Locker Room Facility
045	Warehouse		
		090	Parking Garage
046	Auto Showroom or Office	091	Unfinished Residential Basement
047	Auto Parts & Service		
		095	Covered Mall
048	Tennis Club		
049	Racquetball Court	100	Franchise Restaurant (Fast Food) see following detail list
050	Skating Rink (Ice or Roller)		
		990	Parking, Upper Deck
051	Bank & Savings Institution		
052	Medical Center		
053	Office Building		

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

FRANCHISE RESTAURANT CODES

Franchise Restaurant Name	Use Type Code	(typical) Grade
A&W - prior to '75	101	F
A&W - '75 and after	102	A
Arby's	104	A
Artic Circle - prior to '72	106	F
Artic Circle - '72 and after	107	A
Bonanza Family Restaurant	110	A
Burger King	112	G+
Corner Pocket	115	A
Country Kitchen	118	A
Dairy Queen - prior to '72	120	F
Dairy Queen - '72 and after	121	A
Four B's - prior to '74	125	A
Four B's - '74 and after	126	G
Frontier Pies	130	A
Godfather's Pizza	132	A
Hardee's	134	G
J-B Big Boy	136	A
Kentucky Fried Chicken	140	A
Little Big Man Pizza	146	A
Long Horn	148	A
Long John Silver	150	A
McDonald's - prior to '74	152	A
McDonald's - '74 and after	153	G
Mister Steak	156	A
Pioneer Pies	160	A
Pizza Hut	162	A
Rax	166	G
Seasons'	170	G
Shakey's Pizza Parlor	172	A
Sizzler	174	A
Skipper's Seafood Shoppe	176	A
Sunny's	178	A
Taco Bell	180	A
Taco John's	182	A
Taco Time	184	A
Taco Treat	186	A
Tastee Freeze	188	F
Village Inn Pancake House	190	G
Village Inn Pizza	192	A
Wendy's Old Fashioned Hamburgers	194	G

PART 3: DATA COLLECTION

WALL HEIGHT - Enter the height of the wall described on the Exterior/Interior line story to the nearest foot. This measurement should be made from floor to floor and *not* from floor to ceiling.

NOTE 1: Parapets should not be included in this measurement.

NOTE 2: Gable type roofs should be measured to the eaves. Other roof types, such as shed or sawtooth should be averaged to compute the wall height to the roof line.

EXTERIOR WALL MATERIAL - Enter the code that best describes the type of EXTERIOR WALL MATERIAL of an Exterior/Interior line.

- 00 NONE to indicate the absence of an exterior wall material.
- 01 BRICK or STONE to indicate a brick or stone veneer.
- 02 FRAME to indicate an exterior wall of wood, aluminum siding, composition siding, or shingles on sheathing.
- 03 CONCRETE BLOCK to indicate a masonry wall consisting of concrete compressed into the shape of a block and allowed to harden.
- 04 BRICK & CONCRETE BLOCK to indicate that at least one-third of the exterior walls are of a brick or concrete block material, and the rest of the exterior walls are of the other material.
- 05 TILE to indicate a hard earthenware block which has been hard burned and molded, such as terra cotta.
- 06 MASONRY & FRAME to indicate that at least one-third of the exterior walls are of a frame or masonry (brick or stone) material and the rest of the exterior walls are of the other material.
- 07 METAL, LIGHT to indicate walls constructed of metal panels on wood or steel frame.
- 08 METAL, SANDWICH to indicate walls constructed of a core of insulation covered on both sides by metal panels.

- 09 CONCRETE LOAD BEARING to indicate a concrete wall which supports a part of the building, usually a floor or roof.
- 10 CONCRETE NON-LOAD BEARING to indicate a concrete curtain wall which does not support the roof or floor.
- 11 GLASS to indicate walls of non-supporting glass panels set in metal frame.
- 12 GLASS & MASONRY to indicate walls on non-supporting glass set in Brick or Concrete backup.
- 13 ENCLOSURE to indicate a wood stud or concrete block office or sales enclosure wall in the interior of a building.
- 14 CONCRETE TILT-UP to indicate concrete wall sections that are cast horizontally and tilted or lifted into position.
- 15 SOLAR GLASS to indicate a high quality tinted heat absorbent glass set in metal frame.
- 16 ASBESTOS CORRUGATED RIGID to indicate a rigid corrugated asbestos sheet on wood or steel frame.
- 17 NATIVE STONE to indicate a locally quarried stone used as a load bearing wall. The stone can be irregular-shaped rubble or cut blocks set in place with mortar.

NOTE 1: Exterior wall material for basement, crawl space, and parking garages will always be entered as code "00" - None.

NOTE 2: Exterior wall material for enclosures should always be entered as code "13" - Enclosure.

NOTE 3: Exterior wall material for mezzanines must be entered either as code "00" - None or code "13" - Enclosure.

CONSTRUCTION CLASS - Enter the code that describes the class of construction of the Exterior/Interior line.

- 1 WOOD FRAME / JOIST / BEAM to indicate construction which incorporates wood stud balloon or platform framing or

wood post and beam framing (mill construction). This category also includes masonry structures which incorporate wood joist or plank floor systems, or wood joist, truss, or rafter roof systems.

- 2 FIRE RESISTANT (Reinforced Concrete Frame) to indicate buildings with exposed structural steel, or reinforced concrete columns and beams. Multi-story structures will have steel floor joists with concrete plank or a reinforced concrete floor system. Exterior walls will typically be masonry or metal and glass panels.
- 3 FIREPROOF (Structural Steel Frame) to indicate typically high-rise buildings with fabricated, heavy, structural steel column and beam framing which has been enveloped in a fireproof material such as concrete or gypsum. This incombustible material is applied to protect structural components of the building so that it can withstand a complete burnout of its contents without structural damage. Floors will be reinforced concrete or precast concrete plank on steel joists protected by a gypsum-vermiculite plaster on metal lath ceiling. Exterior walls will be masonry or metal and glass panels.
- 4 PRE-ENGINEERED STEEL - to indicate buildings framed with prefabricated steel members. The structure will incorporate either metal beams, girders, columns and purlins, or light gauge steel joists manufactured from cold formed shapes of sheet or strip steel. Multi-story buildings may have floors of wood, steel, or concrete. Exterior walls will typically be prefinished metal siding or sandwich panels.

NOTE 1: For crawl space always enter construction type 1 and make no further entries on that line.

NOTE 2: Mezzanines and the upper level of parking garages entries require the CONSTRUCTION CLASS to be blank.

PERCENTAGE NET RENTABLE TO GROSS AREA - Enter the percentage of net rentable area to gross area. The gross area will be used for Cost Approach valuation calculations and the net rentable area will be used for the Income Approach valuation calculations. If there is no

difference between the net rentable area and the gross area, leave this field blank.

621-628 INTERIOR DATA COM S6

Required entry for building. *At least one line, field codes 611 and 621, is required.*

In describing the various positions of a Building Section, a concept of Exterior/Interior lines is needed. Please review the introductory paragraphs of this Section for a discussion on Building Sections and Exterior/Interior Lines.

INTERIOR FINISH % (PERCENT) - Enter the extent of interior finish expressed in a percent. Consideration should be given to the floors, ceilings, and walls.

NOTE 1: Consideration should be given to the STRUCTURE TYPE CODE of the Exterior/Interior line. For example, you would not expect to find the same extent of interior finish in a warehouse that you would find in a professional building.

NOTE 2: As described earlier, the building is listed by sections. Each section has been assigned a USE TYPE or has been described in terms of the section's original construction use intention. Since the cost figures to be used to cost out the section and specific use type are a cost that is applicable to the specific type of section or structure under appraisal, the interior should be judged from that standpoint. An example would be:

An office building section is described as having a use type of "general office." When this use type is recorded for this section, the interior is assumed to be completely finished. For mass appraisal it is not necessary to detail the office section's specific types of finish. The costing tables for general office use type already have finished interior built into their pricing rates. The data collector is really trying to determine if the complete section described as general office is 100% finished. If he/she finds the area is not to be considered 100% finished, the property record card should denote what percent is finished.

PART 3: DATA COLLECTION

Another example would be a warehouse. The property record card has been appropriately marked to indicate that the section is for warehouse use. Since warehouse interior walls are normally unfinished, or just painted, the costing tables for this use type would automatically reflect minor interior finish. Therefore, for a use type describing a warehouse, the data collector would record the interior as being 100% finished.

NOTE 3: Costing tables are established to appropriately consider the normal state of interior finish for each USE TYPE. Data collectors should consider that each USE TYPE to have 100% finish, even in the case of a warehouse, unless it is discovered that the percent of finish is not 100%.

PARTITIONS - Enter the code that describes the extent of interior partition walls within the Exterior/Interior line.

- 0 NONE to indicate that there are no partitions at all.
- 1 BELOW NORMAL to indicate that only a few partitions have been constructed and that most similar structures have a few more partitions than the subject structure.
- 2 NORMAL to indicate that the subject structure has about the same extent of partitioning that is found in similar structures.
- 3 ABOVE NORMAL to indicate that the subject structure has rather extensive partitioning when compared to similar structures used for the same purpose.

NOTE 1: The extent of partitioning should always be compared to what could be considered normal for structures having the same use. The use type code should be considered. For example, a structure that was built as a hotel but is now used as an office building will probably have more extensive partitions (3 - ABOVE NORMAL) than a structure built as an office building and used as an office building.

NOTE 2: Partitions should be recorded based

on whether the amount of partitioning is normal or not normal for the particular section use type. In the event that partitioning for a particular use type is considered above or below normal, all the data collector need do is to record the difference by use of a code symbol indicating the above or below status. The pricing tables are set up to appropriately cost out "normal," "below normal," "above normal," or "none" for each use type. Normal partitions for a retail store would be one partition separating the sales area from the storage area and one small office. In the event that there were more partitions, the data collector would record "above normal."

HEATING SYSTEM TYPE - Enter the code denoting the predominant heating system type utilized within the Exterior/Interior line.

- 0 NONE to indicate that no heating system exists.
- 1 HOT AIR to indicate either forced or gravity system.
- 2 HOT WATER or STEAM to indicate both single and dual circulation heating system types.
- 3 UNIT HEATERS or SPACE HEATERS to indicate the use of non-central heating units.
- 4 ELECTRIC to indicate the presence of an electric heating system. This system is characterized by electric resistance elements that convert electricity into heat. These elements are embedded in the floors, walls, ceilings, or baseboard to provide radiant heat.
- 5 HEAT PUMP to indicate a reverse cycle refrigeration unit which can be used for heating and cooling.
- 6 SOLAR to indicate either a passive or an active solar system.

AIR CONDITIONING TYPE - Enter the code denoting the type of air conditioning within the Exterior/Interior line.

- 0 NONE to indicate that there is no air conditioning.

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

- 1 CENTRAL to indicate that there is (either separately or combined) a central cooling system commensurate with the quality grade specifications of the structure.
- 2 UNIT (Real Property) to indicate that there is air conditioning to the structure provided by individual units that are valued as real property.

NOTE: Window air conditioners are not considered real property and should be considered as 0 - NONE.

PLUMBING/WATER - Enter the code describing the extent and adequacy of the plumbing and piping system within the Exterior/Interior line. Consideration must be given to the USE TYPE of the Exterior/Interior line. For example, motels naturally have more extensive plumbing systems than retail stores.

- 0 NONE to indicate that there is no plumbing.
- 1 BELOW NORMAL to indicate that the plumbing is below normal for the USE TYPE of the Exterior/Interior line.
- 2 NORMAL to indicate that the plumbing is normal for the USE TYPE of the Exterior/Interior line.
- 3 ABOVE NORMAL to indicate that the plumbing is above normal for the USE TYPE of the Exterior/Interior line.

PHYSICAL CONDITION - Enter the one-digit numeric code denoting the physical condition of the Exterior/Interior line in relation to its age. Consideration should include foundation, frame, exterior walls, roof, heating, air conditioning, lighting and electrical systems, plumbing, internal walls, and floor finish.

- 1 POOR to indicate that the Exterior/Interior line is structurally unsound. Major structural elements require replacement. The interior is in a dilapidated condition and does not appear suitable for use.
- 2 FAIR to indicate that the Exterior/Interior line shows marked wear and deterioration but the property is usable for commercial or industrial purposes. It could be characterized as "needing work".

- 3 NORMAL to indicate that the Exterior/Interior line shows only minor signs of physical deterioration due to "wear and tear". There are few indications of deferred maintenance and no significant repairs or replacements are necessary.
- 4 GOOD to indicate that the Exterior/Interior line is in new or "like new" condition. There are no deficiencies in material or construction and no signs of deferred maintenance.
- 5 EXCELLENT to indicate that a major renovation or rehabilitation of the Exterior/Interior line has taken place. The effective age of the Exterior/Interior line has been altered to that of a much newer building in good condition. The amount of work done to enhance the appearance and structural soundness of the Exterior/Interior line is far in excess of that required for normal maintenance.

FUNCTIONAL UTILITY FACTOR - Enter the one-digit numeric code denoting the functional utility of the Exterior/Interior line. Functional utility may be defined as the ability of the Exterior/Interior line to perform the function for which it is intended. It is the combined effect on marketability of the condition, utility, and desirability of the property. Consideration should be given to architecture, design and layout, sizes and types of rooms, and performance standards.

BASEMENT:

- 0 NONE to indicate that the basement has very little possibility of being utilized to any great degree. May be low posted and/or dirt floor. May be wet.
- 1 POOR to indicate that the basement is capable of being only partially utilized due to height, size, ingress and egress, etc. Has no elevator service.
- 2 FAIR to indicate that the basement may be capable of being utilized for dead storage, etc., but lacks good elevator service, although it may have old cable controlled type.
- 3 NORMAL to indicate that the basement is capable of being fully utilized with good

PART 3: DATA COLLECTION

movement of materials to first floor level by elevator or other mechanical means.

- 4 GOOD to indicate that an exceptional utilization of entire basement area is possible. May house all or part sales, secondary office space, lounge, function rooms, kitchen, etc. Must be served by modern elevator.

FIRST FLOOR:

- 0 NONE to indicate that no possible present or future usefulness exists.
- 1 POOR to indicate that the first floor exhibits very little possible utility at present or in the future due to shape, layout, size, construction, etc.
- 2 FAIR to indicate that there may be excessive wasted space due to shape and size. Headroom and/or bay size is less than adequate. Problems exist with ingress or egress.
- 3 NORMAL to indicate that the first floor layout provides for nearly full utilization of space. There is sufficient headroom and bay size to fulfill the function for which it is intended.

NOTE: Most first floor areas will fall into this classification.

- 4 GOOD to indicate that the first floor has exceptional utilization due to layout, ingress and egress. There is little or no wasted floor area and a maximum of net leasable space exists.

SECOND FLOOR:

- 0 NONE to indicate that the second floor has no present or future utilization.
- 1 POOR to indicate that the second floor has a low percentage of net leasable to gross floor area. The plumbing and lighting are obsolete. It may have small bays or be low posted. The overall layout is poor and no elevator service exists. There is no off-street parking available in the immediate area.

- 2 FAIR to indicate that the second floor has excessive hallways, stairwells, elevator shafts, etc., which result in a lower percentage of net leasable space. There may be an older type manually operated elevator or none at all. There is still proper ingress and egress but little off-street parking is available in the area.
- 3 NORMAL to indicate that the second floor layout provides for nearly full utilization of space with normal hall and stairwell areas. A self-service elevator is available. There is adequate off-street parking available in the immediate area.
- 4 GOOD to indicate that the second floor has exceptional utilization. There is little or no wasted floor area. A modern self-service elevator is available. There is more than adequate off-street parking available in the immediate area.

ABOVE SECOND FLOOR:

Use the same guidelines as SECOND FLOOR except to consider that on buildings with no elevator, the higher the floor level, the less desirable the space becomes.

It would be highly unlikely, in any building to progress upward floor by floor and have the functional utility increase. For example, if the second floor is classified as FAIR, it would not be likely for the third floor to be NORMAL.

NOTE: Economic obsolescence is addressed during valuation review.

INCOME AND EXPENSE INFORMATION

For convenience, space is provided on the Commercial CAMA subsystem for capturing information pertinent to apartments and/or parking information for any type structure. This information is in addition to the information that is entered on the Income and Expense subsystem.

631-638 APARTMENT DATA COM S7

Optional entry for apartments.
Enter up to six different bedroom and bath combinations for apartment buildings. When utilized, all character positions must be filled in. Enter the number of units, number of bedrooms, and number of baths for each identical apartment combination. Use leading zeros if necessary.

Enter 1.0 for a full bath with no half bath, 1.5 for one full bath and one half bath, 2.0 for two full baths and no half bath, etc.

639 PARKING DATA COM S7

Optional
Enter the number of covered and uncovered parking spaces for the parcel.

OTHER BUILDING AND YARD IMPROVEMENTS

This part provides guidelines for collecting and recording additional structures or site improvements not part of the principle structure.

699 DELETE: COMMERCIAL OBY COM GPD Optional

This is a computer file maintenance entry and normally will not be utilized on the field card. The purpose of the delete is to remove all data previously entered in the computer for Commercial fields 701-706. This function is initiated by selecting option "06" from the On-Line Menu of the Commercial subsystem.

701-706 OTHER BUILDING & YARD IMPROVEMENTS COM S8

Optional
Up to six OTHER BUILDING and YARD IMPROVEMENTS per record may be entered. There are numerous types of OBY's which may be encountered on commercial and industrial properties. The most common of these have been coded and included in the *Table of Codes and Dimensions for Commercial Other Building and Yard Improvements* following the OBY coding instructions. The inclusion of all possible items is considered impractical; however, the ability to collect data on uncoded items has been provided for, see chart entry MS1.

OBY CODE - Enter the OBY Code denoting the type of OTHER BUILDING and YARD IMPROVEMENT being described.

FLAT VALUE - Enter a plus (+) or minus (-) sign to denote the addition or deduction of a flat dollar amount which would then be entered in the Dimensions column. If the FLAT VALUE field is not utilized, this entry must be left blank.

DIMENSIONS - SIZE - Enter either the dimensions (width and length) or square foot area of the item being described.

To enter the dimensions, character positions are provided to enter eight characters, three numeric characters denoting the width, one multiplication (X) symbol and four numeric characters denoting the length. The multiplication symbol must always be entered in the fourth character position from the left (within the two vertical hash marks). All character positions must be filled in. Use leading zeros if necessary.

To enter the square foot area of the item, character positions are provided to enter eight numeric characters (up to 99,999,999 square feet). Utilize the character positions to the right. Leading zeros are not necessary.

NUMBER IDENTICAL UNITS - Enter the total number of identical OTHER BUILDING AND YARD IMPROVEMENTS. Both character positions must be filled in. Use leading zeros if necessary.

NOTE: When activating the FLAT VALUE (+/-) column for any entry, the amount entered in the DIMENSIONS area will be used as the RCNLD for that line entry (times the NUMBER OF IDENTICAL UNITS). The YEAR BUILT, PHYSICAL CONDITION, and FUNCTIONAL UTILITY, must be entered, but are used as descriptive data only.

PHYSICAL CONDITION - Enter the one-digit numeric code denoting the physical condition of the OTHER BUILDING and YARD IMPROVEMENT being described.

- 1 POOR to indicate that the OBY is in a dilapidated condition. It could be characterized as "beyond repair".

PART 3: DATA COLLECTION

- 2 FAIR to indicate that the OBY shows signs of deferred maintenance, but the improvement does contribute to the commercial or industrial operation. The improvement could be characterized as "needing work".
- 3 NORMAL to indicate that the OBY shows only minor signs of physical deterioration due to "wear and tear". There are few indications of deferred maintenance.
- 4 GOOD to indicate that the OBY shows no signs of deferred maintenance. It could be characterized as in new or "like new" condition.
- 5 EXCELLENT to indicate that the OBY has undergone major renovation or rehabilitation. Despite the actual age of the improvement, the effective age has been altered to a much newer improvement in good condition. The amount of work done to enhance the appearance and/or structural soundness of the improvement is far in excess of that required for normal maintenance.

NOTE: Deferred maintenance may be defined as desirable repairs and rehabilitation that will require immediate expenditures. It does not necessarily imply inadequate prior maintenance.

FUNCTIONAL UTILITY - Enter the one-digit numeric code denoting the functional utility of the OTHER BUILDING and YARD IMPROVEMENT. Functional utility may be defined as the ability of the improvement to assist the property to perform the function for which it is intended. Consideration should be given to design, size, and performance standards.

- 0 NONE to indicate that the OBY adds nothing to the ability of the property to perform the function for which it is intended. It can in no way be considered serviceable.
- 1 POOR to indicate that the OBY adds little to the ability of the property to perform the function for which it is intended. Major renovation is necessary to allow the improvement to make an adequate contribution to service.

- 2 FAIR to indicate that the OBY adds to the ability of the property to perform the function for which it is intended, but the effect is minimal.
- 3 NORMAL to indicate that the OBY adds an adequate amount to the ability of the property to perform the function for which it is intended.
- 4 GOOD to indicate that no functional deficiencies exist for the OBY and that the improvement is well suited to aid the ability of the property to perform the function for which it is intended.

YEAR BUILT OR INSTALLED - Enter the date in which the OTHER BUILDING and YARD IMPROVEMENT was constructed or installed. For Example: 1976 ... enter 76.

PERCENT GOOD - Optional entry. Enter the appraiser's judgment of remaining percent good for the OTHER BUILDING or YARD IMPROVEMENT being described. Percent good and depreciation are complements of each other. Therefore, an improvement which is estimated to have 35% depreciation as of a given time is said to be 65% good. In this way, the calculated Percent Good can be overridden by entering the appraiser's estimate of the percent good. However, the year built, physical condition, and functional utility factors must still be entered.

NOTE: The purpose of this entry is to be an override to the computer calculated PERCENT GOOD.

800 TOTAL OTHER IMPROVEMENTS

Optional

COM S8

This entry may be utilized in numerous ways. Since it is not expected that every parcel should be appraised by computer-assisted techniques, it is necessary to allow for the value of manually appraised properties to be integrated into the system. This is done by use of the TOTAL OTHER IMPROVEMENTS category. This category may also be utilized to add or deduct a flat dollar amount from the overall improvement value of the parcel.

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

DESCRIPTION - Enter the description of the manually appraised property or to explain the reason for an addition or deduction of a flat dollar amount.

VALUE - Enter a dollar value amount up to \$999,999,999. Use the character positions to the right. Omit leading zeros.

(+/-) - Enter a plus (+) or minus (-) to denote the addition or deduction of value.

TABLE OF CODES AND DIMENSIONS FOR
COMMERCIAL OTHER BUILDING and YARD IMPROVEMENTS

OBY Description	Code	Dimension	# Units
Air Conditioning, central	AC1	Dim or Sq.ft.	
Air Conditioning, unit	AC2	1	Each
Annex, wood crib	AN1	Cap in bushels	
Annex, concrete	AN2	Cap in bushels	
Bank Drive-In, canopy	BC1	Dim or Sq.ft.	
Bank Drive-In, teller booth	BC2	Dim or Sq.ft.	
Boat Dock, light wood deck, light post	BD1	Dim or Sq.ft.	
Boat Dock, medium wood deck, wood girders	BD2	Dim or Sq.ft.	
Boat Dock, heavy wood deck, heavy pilings	BD3	Dim or Sq.ft.	
Boat House, frame or concrete block	BB1	Dim or Sq.ft.	
Boat House, masonry	BB2	Dim or Sq.ft.	
Boat Slip, economy	BS1	1	Each
Boat Slip, average	BS2	1	Each
Boat Slip, good	BS3	1	Each
Bulkhead	BK1	Lin.ft.	
Canopy Roof, low cost	CP5	Dim or Sq.ft.	
Canopy Roof, average	CP6	Dim or Sq.ft.	
Canopy Roof, good	CP7	Dim or Sq.ft.	
Carport	RC1	Dim or Sq.ft.	
Drive House, wood & metal, good quality	DH1	Dim or Sq.ft.	
Drive House, wood & metal, average quality	DH2	Dim or Sq.ft.	
Drive House, wood & metal, low cost quality	DH3	Dim or Sq.ft.	
Drive House, concrete, good quality	DH4	Dim or Sq.ft.	
Drive House, concrete, average quality	DH5	Dim or Sq.ft.	
Drive House, concrete, low cost quality	DH0	Dim or Sq.ft.	
Drive-In Theater Screen	DT1	Dim or Sq.ft.	
Elevators, wood crib	EL1	Cap in bushels	
Elevators, concrete	EL2	Cap in bushels	

PART 3: DATA COLLECTION

TABLE OF CODES AND DIMENSIONS FOR
COMMERCIAL OTHER BUILDING and YARD IMPROVEMENTS (Cont'd)

OBY Description	Code	Dimension	# Units
Fence, chain link	RF1	Hgt x Lin.ft.	
Fence, picket	RF2	Hgt x Lin.ft.	
Fence, stockade	RF3	Hgt x Lin.ft.	
Fence, post & rail	RF4	Hgt x Lin.ft.	
Fence, basketweave	RF5	Hgt x Lin.ft.	
Fence, brick or masonry	RF6	Hgt x Lin.ft.	
Fence, ornamental iron	RF7	Hgt x Lin.ft.	
Fence, barbed wire - 4 strand	RF8	Hgt x Lin.ft.	
Fence, stock yard corrals	RF9	Hgt x Lin.ft.	
Fence, pipe & post	RF0	Hgt x Lin.ft.	
Flat Storage, wood	FS1	Cap in bushels	
Flat Storage, metal	FS2	Cap in bushels	
Fuel Storage Tank, underground	AU1	Gallons	
Fuel Storage Tank, aboveground	AU2	Gallons	
Fuel Storage Tank, horizontal pressure	AU3	Gallons	
Garage, detached, frame, finished	RG1	Dim or Sq.ft.	
Garage, detached, masonry, finished	RG2	Dim or Sq.ft.	
Garage, detached, frame, unfinished	RG3	Dim or Sq.ft.	
Garage, detached, masonry, unfinished	RG4	Dim or Sq.ft.	
Greenhouse, economy, wood frame, plastic covering	GH1	Dim or Sq.ft.	
Greenhouse, average, wood frame, glass walls	GH2	Dim or Sq.ft.	
Greenhouse, good, pipe/metal frame, glass walls	GH3	Dim or Sq.ft.	
Kioska (Fotomat, etc.)	KF1	Dim or Sq.ft.	
Light, mercury vapor, wall mounted	LT1	1	Each
Light, incandescent, wall mounted	LT2	1	Each
Light, fluorescent, pole & bracket	LT3	1	Each
Light, incandescent, pole & bracket	LT4	1	Each
Light, mercury vapor, pole & bracket	LT5	1	Each
Miscellaneous Structure, (+ or - must be entered)	MS1	Flat Value	
Paving, asphalt	PA1	Dim or Sq.ft.	
Paving, concrete, 4", w/o wire mesh	PA2	Dim or Sq.ft.	
Paving, concrete, 5"-6", w wire mesh	PA3	Dim or Sq.ft.	
Plumbing Fixture	PB1	1	Each
Railroad Trackage (spurs)	RR1	Lin.ft.	
Restroom Structure, frame/concrete block	TR1	Dim or Sq.ft.	
Restroom Structure, brick or stone	TR2	Dim or Sq.ft.	
Service Station Attendant's booth, steel/glass on masonry	GS1	Dim or Sq.ft.	
Service Station Attendant's booth, stucco/glass on frame	GS2	Dim or Sq.ft.	

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

TABLE OF CODES AND DIMENSIONS FOR
COMMERCIAL OTHER BUILDING and YARD IMPROVEMENTS (Cont'd)

OBY Description	Code	Dimension	# Units
Shed, machinery	SH1	Dim or Sq.ft.	
Shed, aluminum	SH2	Dim or Sq.ft.	
Shed, finished metal	SH3	Dim or Sq.ft.	
Shed, quonset	SH4	Dim or Sq.ft.	
Shed, lumber, frame, 2 sides open	SH5	Dim or Sq.ft.	
Shed, lumber, frame, 4 sides open	SH6	Dim or Sq.ft.	
Scales, platform	CA1	Cap in pounds	
Scales, truck	CA2	Cap in pounds	
Scales, cattle	CA3	Cap in pounds	
Skating Rink, outdoor, ice skating	SK1	Dim or Sq.ft.	
Sprinkler System, wet pipe	SS1	Dim or Sq.ft.	
Sprinkler System, dry pipe	SS2	Dim or Sq.ft.	
Swimming Pool, outdoor, commercial	RP5	Dim or Sq.ft.	
Tanks, wooden	TA1	Cap in bushels	
Tanks, corrugated steel	TA2	Cap in bushels	
Tanks, bolted steel hopper	TA3	Cap in bushels	
Tanks, welded steel	TA4	Cap in bushels	
Tanks, bolted steel	TA6	Cap in bushels	
Tanks, underground fiberglass	TA7	Cap in gallons	
Tennis Court, asphalt	TC1	1	Each
Tennis Court, concrete	TC2	1	Each
Tennis Court, clay	TC3	1	Each
Tunnel, grain elevators	TU1	Dim or Sq.ft.	
Utility Building, frame	RS1	Dim or Sq.ft.	
Utility Building, metal	RS2	Dim or Sq.ft.	
Utility Building, brick/stone	RS3	Dim or Sq.ft.	

PART 3: DATA COLLECTION

COMMERCIAL VALUATION OVERRIDE FIELDS

812 PERCENT COMPLETE COM S9 Optional

Use only if a new structure is partially completed to indicate percentage of completion as of the General Assessment Day. *Do not* consider remodeling, additions or older improvements with unfinished areas. Enter the percent complete in whole percent, right-justified.

820 MODEL ADJUSTMENTS COM S9 Optional

Income models are predicated on typical income and expenses for a neighborhood. Some properties may not be typical for the neighborhood and need to have the income model "adjusted" for the property. Income model adjustments allow you to fine-tune the model for the subject property.

This field allows you to modify the yearly income rate, the annual expense rate, and the financing (capitalization) of the subject property. Any or all three of these model terms can be adjusted independently. It is possible that there has already been a model adjustment input for the parcel, and care should be taken to assure that the current adjustments are carried on.

INCOME ADJUSTMENT - The income stream for the property as generated by the model may be adjusted by use of a percentage factor.

Enter the percentage by which the base income of the model is to be multiplied. Input of 100% means that there will be no adjustment. However, if no adjustment is needed for this property, leave this field blank.

An adjustment for one USE TYPE of a property, will cause an adjustment for all USE TYPES of the property.

For example, the model generates \$5.00/sq.ft. of gross leasable area, but for this property \$4.00/sq.ft. would yield a more realistic value. Use an 80% adjustment.

EXPENSE ADJUSTMENT - An Expense Adjustment may be needed in cases of net leases or use of an effective age. If an effective age is used, expenses must be recalculated based on the adjusted age factor.

Enter the percentage by which the expense rate of the model is to be multiplied. Input of 100% means that there will be no adjustment. However, if no adjustment is needed for this property, leave this field blank.

CAPITALIZATION RATE ADJUSTMENT - The capitalization rate as listed in the model may be overridden by entering an override cap rate. Since there are two possible approaches to capitalization, you must be careful to know what approach is being used by the model in order to properly adjust the rate.

Enter the three decimal places indicating the desired override capitalization rate. For example, enter .115 if the desired cap rate is 11.5.

825 OCCUPANCY OVERRIDE COM S9 Optional

This entry is used to override the typical occupancy rate as set in the Income Model. The number to be entered is to be expressed as the percent of occupancy. For example, a building for which you determine there is a 15% vacancy, use 85% as the OCCUPANCY OVERRIDE figure.

830 VALUATION METHOD COM S9 Optional

This field will direct the system to always use either the cost value, the income value, or a field-generated override value for this parcel's final value. The allowable codes for this field are below.

The reviewer may determine that neither the cost value nor the income value as generated by the system accurately reflects what the final value for the parcel should be. If, after further analysis, the reviewer feels that the adjustment of either the PHYSICAL CONDITION or the FUNCTIONAL UTILITY fields and/or the use of the MODEL ADJUSTMENT (820) fields would not be justified, the parcel's value must be manually calculated and entered in the FINAL BASE VALUE (960) field. The entry for this field, the VALUATION METHOD, should be "3" to indicate that the system generated values have been overridden.

34. COMMERCIAL AND INDUSTRIAL IMPROVEMENTS

Code	Report Entry	System Action
1	Use Cost	The calculated cost value will be the parcel's final value.
2	Use Income	The income value will be the parcel's final value <i>unless</i> there is no income value generated for the parcel, in which case the cost value will be the parcel's final value.
3	Use Override	The reviewer's manually calculated and entered value in the FINAL BASE VALUE (960) field will be the parcel's final value. If no value is entered in field (960), the previous final value will be used.
4	Use Cost Suppress Income	The calculated cost value will be the parcel's final value. No income value will be produced for this parcel.

835 INCOME YEAR OVERRIDE COM S9 Optional

Enter the last two digits of the effective year built to override the age (year built of the property) that is used in calculating building expenses.

For example, if the expenses for a property should not be adjusted the same amount as similarly aged buildings because of rehabilitation, an effective age can be assigned the building that would make less of an age adjustment to the building expenses.

965 REVIEWER REASON CODE COM S9 Optional

This field should be used to further explain the reason that the system generated values were overridden by a manually derived value. A list of possible reasons is below.

Another field that is useful in describing the reason for a value override is the PARCEL TIEBACK (190) field. This field is particularly helpful if the value override is because of another parcel; a multi-parcel property, or a secondary location.

Code	Explanation
01	Location
02	Secondary location
03	Excessive land
04	Unique property
05	Multiple parcel property
06	Subject not typical for model
07	Multi-use within the same building
08	Non-conforming use within the neighborhood
09	Economic mis-improvement
10	Unfinished construction
11	Undivided interest
12	Gutted building
13	Building partially out of taxing jurisdiction
14	No predicted value

CONDOMINIUM VALUE SEGREGATION

If the FINAL BASE VALUE of this condominium master record must be partitioned into General and Limited Ownership values, the following two fields *must both* be completed.

868 GENERAL OWNERSHIP COM S9 Optional

Enter the value of the land and improvements that are held in General Ownership.

869 LIMITED OWNERSHIP COM S9 Optional

Enter the value of the land and improvements that are held in Limited Ownership.



A34.1. UNIQUE COMMERCIAL / INDUSTRIAL DATA COLLECTION PROCEDURES

A34.1.1. MIXED USE STRUCTURES,
INCLUDING OFFICE
WAREHOUSES

A special problem exists in describing structures that have been designed to accommodate tenants with varying requirements. They may be mixed - with finished office areas, open retail areas, or shop and storage areas. To properly handle them, they should be classed as follows:

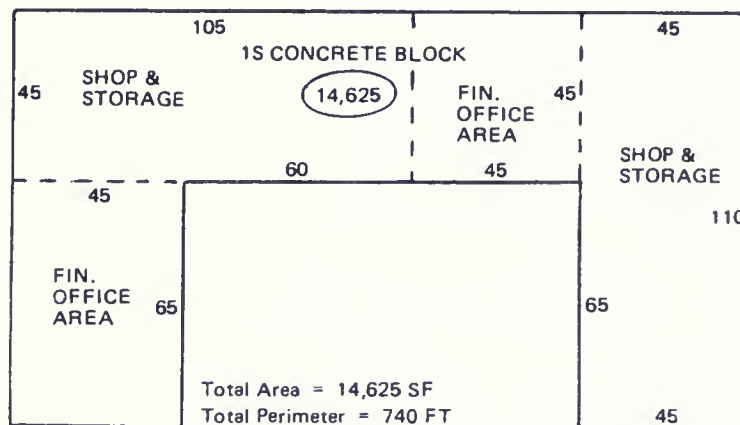
- 081 Multi Use - Apartments
- 082 Multi Use - Office
- 083 Multi Use - Sales
- 084 Multi Use - Storage

However, there are no distinct separations into sections. Since they can be scattered and may change as time goes on, it is difficult to list them as Section 1, Section 2, Section 3, etc.

The following procedure is used for this type of building. See Example A34-1.

- The Structure Type is 374 - Retail, Multi Occupancy. Do not use 397 - Office / Warehouse, since this type of structure is not really the same as warehouse construction.
- Indicate the sizes and classification of the various areas on the sketch.
- Somewhere in the sketch area indicate the total area and the area for each Use Type. Also indicate the total perimeter.
- For each Use Type, calculate the actual perimeter.

EXAMPLE A34-1. SKETCH OF A MIXED-USE COMMERCIAL STRUCTURE



OFFICE: 4,950 SF (34% of Total Area)
Effective Perimeter = 265 FT

SHOP/STORAGE: 9,675 SF (66% of Total Area)
Effective Perimeter = 475 FT

EXTERIOR DATA										INTERIOR DATA							
SEC NO	LEVELS		DIMENSIONS		PERIMETER	USE TYPE	WALL HGHT	EXT WALL	CONST CLASS	% NET GROSS	INTERIOR FINISH %	PTNS	HEAT	A/C	PLUMB	PHYS COND	FUNC UTIL
	FROM	TO	SIZE														
611	1	01	01	9675	475	084	14	03	1	--	621	100	2	1	1	2	3
612	1	01	01	4950	265	082	14	03	1	--	622	100	2	1	1	2	3

PART 3: DATA COLLECTION

A34.1.2. MEZZANINES

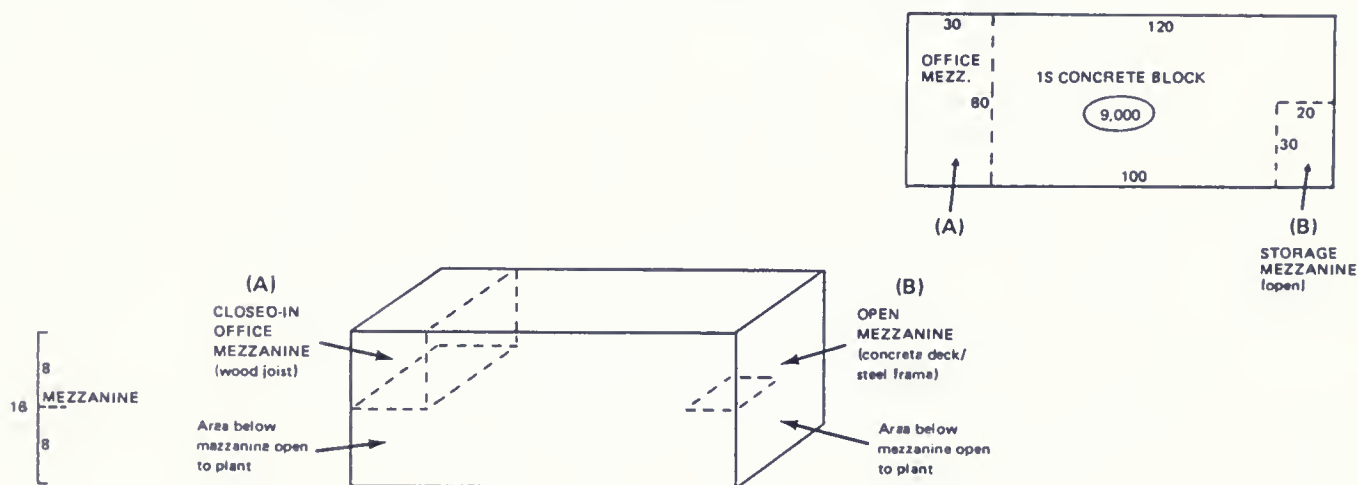
A mezzanine is defined as "A low story formed by placing a floor between what would ordinarily be the floor and ceiling of a high story."

In its simplest form, a mezzanine must consist of a floor capable of supporting varying degrees of load, and some type of horizontal and vertical support or frame for that floor. Mezzanines may also be closed in for offices, storage labs, toilet rooms, or even living areas. See Example A34-2.

The proper procedure for handling mezzanines is to first describe the basic building as if the mezzanine was not there; that is, from the standpoint of dimensions, height, plumbing, finish, sprinkler, etc. Then proceed on the next line to describe the mezzanine using the same section number and "M1-M1." The number character identifies only the number of mezzanines that exist in that section. For example, if there were three separate mezzanines, they would be listed as "M1-M1", "M2-M2", and "M3-M3." The number does not refer to the floor on which the mezzanine is located.

- The height of the example building is sixteen feet. This measurement should be made with no regard for mezzanines, as if they did not exist.
- (A) is an office mezzanine that is open underneath. Since three of the mezzanine's sides are the walls of the main structure, there is only 60 feet of wall. Always use the "multi-use" codes to describe the Use Type and indicate the actual height of the mezzanine wall, even if it does not go all the way to the main structure roof. As with an enclosure, always use Exterior Wall Type code "13" for the mezzanine walls. Leave Construction Class blank. Notice that the office area has a different type of heating and air conditioning system than the manufacturing area.
- (B) is an open mezzanine used for storage. It has no walls, so perimeter is "0". The height to the roof from the mezzanine floor is "8" feet, even though there are no walls. Indicate Exterior Wall Type as "00", since there are no walls. Interior finish should be "0", since there are no partitions and any finish (i.e., paint) present on the main wall may already have been accounted for.

EXAMPLE A34-2. SKETCH SHOWING TWO MEZZANINES



EXTERIOR DATA											INTERIOR DATA						
SEC NO	LEVELS FROM	TO	SIZE	PERIMETER	USE TYPE	WALL HGHT	EXT WALL	CONST CLASS	% NET GROSS		INTERIOR FINISH %	PTNS	HEAT	A/C	PLUMB	PHYS CONO	FUNC UTIL
611	1	01	01	060' x 0150'	420	044	16	03	2		621	100	2	3	2	3	3
612	1	M1	M1	030' x 0060'	60	082	08	13	0		622	100	2	1	1	2	3
613	1	M2	M2	020' x 0030'	00	084	08	00	0		623	000	0	0	0	3	3

A34.1.3. PENTHOUSES

A *penthouse* is defined as "A building constructed on the roof of another building, and normally smaller in area than the roof."

First, describe the building as if the penthouse was not there. After all lower floors have been listed, the penthouse is indicated on the next line below the top floor. All positions must be

entered. It is quite possible to have more than one penthouse on a roof. If this is so, describe them as P1-P1, P2-P2, etc., entering data in all positions.

Do not list elevator penthouses or stairway penthouses. The elevator penthouse is included in elevator pricing, and stairway penthouses are not significant.

PART 3: DATA COLLECTION

A34.1.4. OPEN AREAS

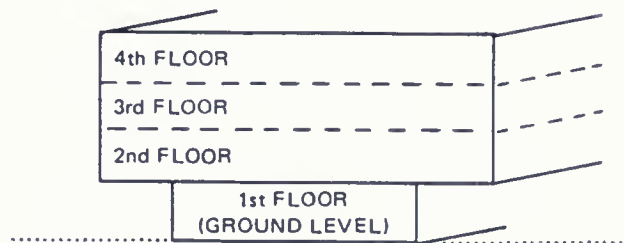
When upper floors extend beyond the first floor, there exists an "open area" under that extension. Do not confuse this situation with buildings that have open parking decks on the lower levels. The open area exists when there is usable space (be it office, apartment, storage or whatever) over completely bare area, such as no floor or slab.

Examples A34-3 and A34-4 illustrate the proper use of the Open Area codes. Note in Example A34-4 that what might be referred to by the office building management as "Floor Number 1" becomes "Floor Number 2" because in describing the building, the parking deck is considered as first floor, even though it is partly below grade.

If questions or problems arise in the listing of complex buildings, consult your supervisor for interpretation.

EXAMPLE A34-3. SKETCH SHOWING OPEN AREAS

15	3S MASONRY & GLASS OPEN AREA	2,250
50	4S MASONRY & GLASS	7,500
150		
15	3S MASONRY & GLASS OPEN AREA	2,250



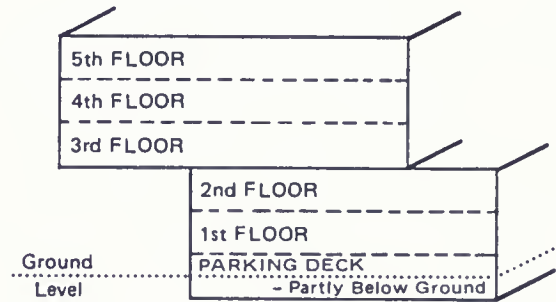
BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS																
	LIME	BDF CODE	FLAT (+/-)	MEASUREMENT 1	MEASUREMENT 2	IDEN UNITS	RCN									
G01	1	OAS		15	150	02										
G02																
G03																
G04																

EXTERIOR DATA										INTERIOR DATA									
	SEC NO	LEVELS		DIMENSIONS		PERIMETER	USE TYPE	WALL HGT	EXT WALL	CONST CLASS	% NET GROSS	INTERIOR FINISH %	PTNS	HEAT	A/C	PLUMB	PHYS COND	FUNC UTIL	
		FROM	TO	SIZE															
G11	1	01	01	050' x 0150		400	053	12	12	2	---	G21	100	2	1	1	2	3	3
G12	1	02	04	080' x 0150		460	053	10	12	2	---	G22	100	2	1	1	2	3	3

A34.1.4. OPEN AREAS (Cont'd)

EXAMPLE A34-4. SKETCH OF OPEN AND BELOW-GRADE AREAS

30	3S MASONRY & GLASS OPEN AREA	5,100
50	5S MASONRY & GLASS PARKING DECK	8,500
	170	
20	2S MASONRY & GLASS PARKING DECK	3,400



BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS						
	LINE	BOF CODE	FLAT (+/-)	MEASUREMENT 1	MEASUREMENT 2	100N UNITS
601	1	0A3		30	170	01
602						
603						
604						

EXTERIOR DATA											INTERIOR DATA							
	SEC NO	LEVELS		DIMENSIONS		USE TYPE	WALL HGHT	EXT WALL	CONST CLASS	% NET GROSS		INTERIOR FINISH %	PTNS	HEAT	A/C	PLUMB	PHYS COND	FUNC UTIL
		FROM	TO	SIZE	PERIMETER													
611	1	01	01	070, x, 0170	480	090	10	00	2	---	621	100	2	0	0	2	3	3
612	1	02	03	070, x, 0170	480	053	10	12	2	---	622	100	2	1	1	2	3	3
613	1	04	06	080, x, 0170	500	053	10	12	2	---	623	100	2	1	1	2	3	3

PART 3: DATA COLLECTION

A34.1.5. OPEN PARKING DECKS

Exterior / Interior Data

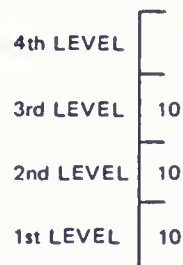
A34.1.5.1. Parking Decks as a Separate Structure

General Building Data

1. Enter the total number of parking spaces in Number of Units.
2. Enter Structure Type Code 338. See Example A34-5.
3. Building Number, Year Built, and Number Of Identical Units should also be entered.

1. Enter "00" in Exterior Walls for all levels, except basement - which should have "09" entered.
2. For the lower open parking deck levels, enter a Use Type of "090" and complete all Exterior / Interior data positions (Fields 611-618).
3. For the upper open parking deck level, enter "990" in Use Type. There must be an entry in each entry position from Section Number through and including Exterior Wall (Fields 611-618). It is also necessary to make entries in Physical Condition and Functional Utility.

EXAMPLE A34-5. SKETCH OF PARKING DECK



EXTERIOR DATA											INTERIOR DATA							
SEC NO	LEVELS		DIMENSIONS		PERIMETER	USE TYPE	WALL HGHT	EXT WALL	CONST CLASS	% NET GROSS	INTERIOR FINISH %	PTNS	HEAT	A/C	PLUMB	PHYS COND	FUNC UTIL	
	FROM	TO	SIZE															
611	1	01	01	110 X 0220	660	090	10	00	3	--	621	100	2	0	0	0	3	3
612	1	02	03	110 X 0220	660	090	10	00	3	--	622	100	2	0	0	0	3	3
613	1	04	04	110 X 0220	660	990	00	00	-	--	623	---	-	-	-	-	3	3

A34.1.5.2. Parking Decks Connected to and as Levels of an Office Building

General Building Data

1. The Structure Type Code is 354 - High Rise Office Building. See Example A34-6.
2. Do not enter parking spaces in Number of Units.
3. Enter remaining data as usual.

Exterior / Interior Data

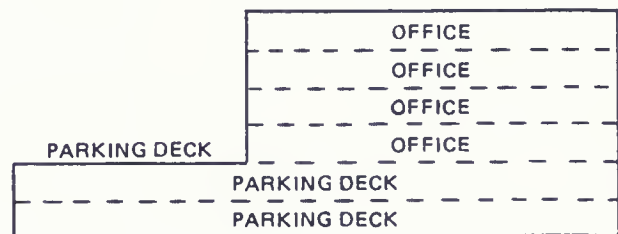
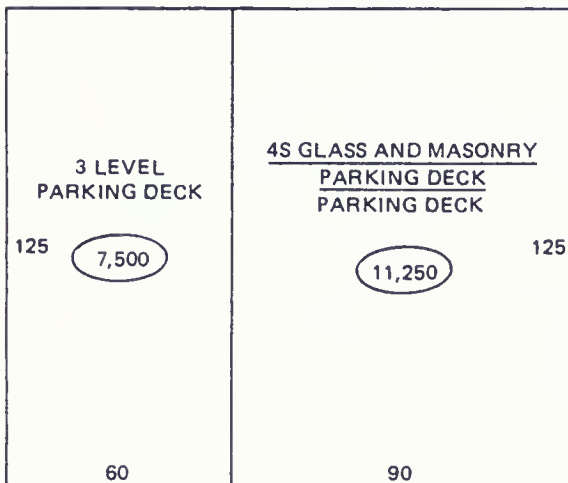
1. Enter "090" in Use Type and enter "00" in Exterior Walls for each parking deck level, except basement levels.
2. If a basement level exists, enter "09" in Exterior Walls.

3. For upper levels excluding the upper open deck, enter as with other structures, except for entering "00" in Exterior Walls.
4. For the upper open parking deck level (if not roofed), enter "990" in Use Type and proceed as described for parking decks as a separate structure.
5. On the level where office structure begins, there would be two entries.

Example:

Levels		Use Type
02 to 02	Parking Deck	090
02 to 02	Office	053

EXAMPLE A34-6. SKETCH OF PARKING DECK WITH OFFICE BUILDING ABOVE



EXTERIOR DATA											INTERIOR DATA						
SEC NO	LEVELS FROM	TO	SIZE DIMENSIONS	PERIMETER	USE TYPE	WALL HGHT	EXT WALL	CONST CLASS	% NET GROSS		INTERIOR FINISH %	PTNS	HEAT	A/C	PLUMB	PHYS COND	FUNC UTIL
611	1	01	01	125 x 0150	550	090	10	00	3	---	621	100	2	0	0	3	3
612	1	02	02	125 x 0150	550	090	10	00	3	---	622	100	2	0	0	3	3
613	1	03	06	125 x 0090	430	053	10	12	2	---	623	100	2	1	1	3	3
614	1	03	03	125 x 0060	245	990	00	00	-	---	624	---	-	-	-	3	3

PART 3: DATA COLLECTION

A34.1.6. ELEVATORS

When describing elevators in Building Other Features - Attached Improvements, indicate the following:

- Enter the pound capacity in the Measurement 1 column, justifying to the right.
- Enter number of stops in the first two positions of the Measurement 2 column, justifying to the

left. Use a leading zero if necessary (three stops would be entered as "03").

- Enter elevator speed in the last four positions of the Measurement 2 column. Use a leading zero when necessary (750 feet per minute would be entered as "0750").

Example A34-7 is for a 3,500 pound capacity, electric passenger elevator with eight stops and a speed of 500 feet per minute. There are two identical elevators.

ELEVATOR SPEED GUIDELINES

Freight	1 to 3 Floors	50' per minute
	4 to 10 Floors	100' per minute
	11 to 20 Floors	150' per minute
	20 and over	200' per minute
Passenger	1 to 3 Floors	150' per minute
	4 to 7 Floors	200' per minute
	8 to 12 Floors	250' per minute
	13 to 16 Floors	300' per minute
	17 to 20 Floors	350' per minute
	21 to 25 Floors	400' per minute
	25 to 40 Floors	500' per minute
	41 to 49 Floors	800' per minute
	50 and over	1000-1400' per minute

EXAMPLE A34-7. DESCRIBING ELEVATORS

BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS						
	LINE	BOF CODE	FLAT (1-7)	MEASUREMENT 1	MEASUREMENT 2	IOEN UNITS
601	1	EL2		3500	080500	02
602						
603						
604						

A34.1.7. ESCALATORS

Use the following procedure for escalators:

- Always enter the correct line number (which corresponds with the first or main floor of the building).
- Enter structure code "EL5" for 32" wide escalators and "EL6" for 48" wide escalators. (Note: These are the only sizes accepted.)
- Leave the Flat Value column blank.
- Enter distance between floors in the Measurement 1 column, justifying to the right. This is the total distance from one *floor* to the next *floor*, not *ceilings*.

- Enter the number "1" in the Measurement 2 column. This number is also to be justified to the right.

- Enter the number of identical units. (Note: To be identical, the width, the structure code [EL5 or EL6], and the distance between floors must be identical. Additional lines must be used if the escalators are not identical.)

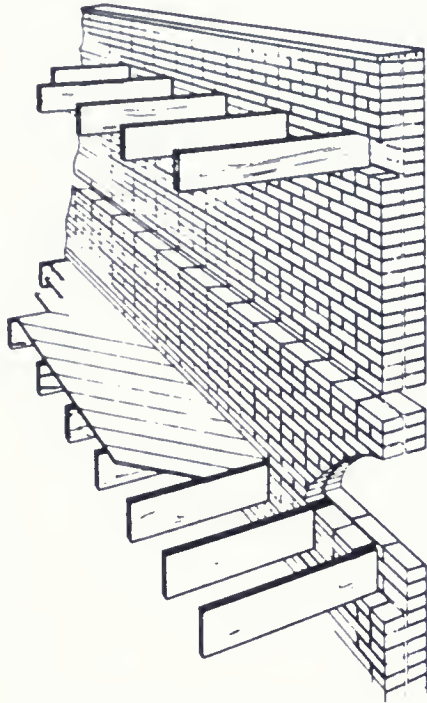
Example A34-8 is for a three-story building with one 32" wide moving stairway going up and one going down, and one 48" wide moving stairway going up and one going down, serving all three floors. The distance between the first and second floors is 18 feet. The distance between the second and third floors is 14 feet.

EXAMPLE A34-8. DESCRIBING ESCALATORS

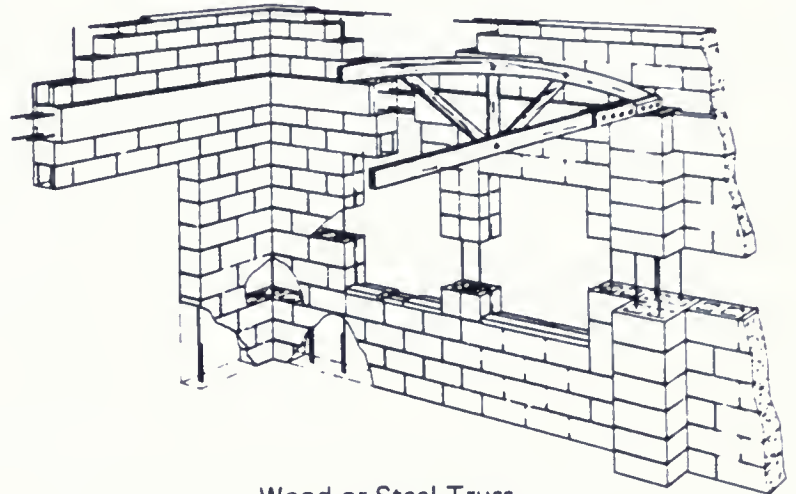
BUILDING OTHER FEATURES - ATTACHED IMPROVEMENTS						
	LINE	BOF CODE	FLAT (+/-)	MEASUREMENT 1	MEASUREMENT 2	IOEN UNITS
601	1	EL5	-	18	1	02
602	1	EL6	-	18	1	02
603	1	EL5	-	14	1	04
604	1	EL6	-	14	1	04

A34.2. BUILDING CONSTRUCTION CLASSES

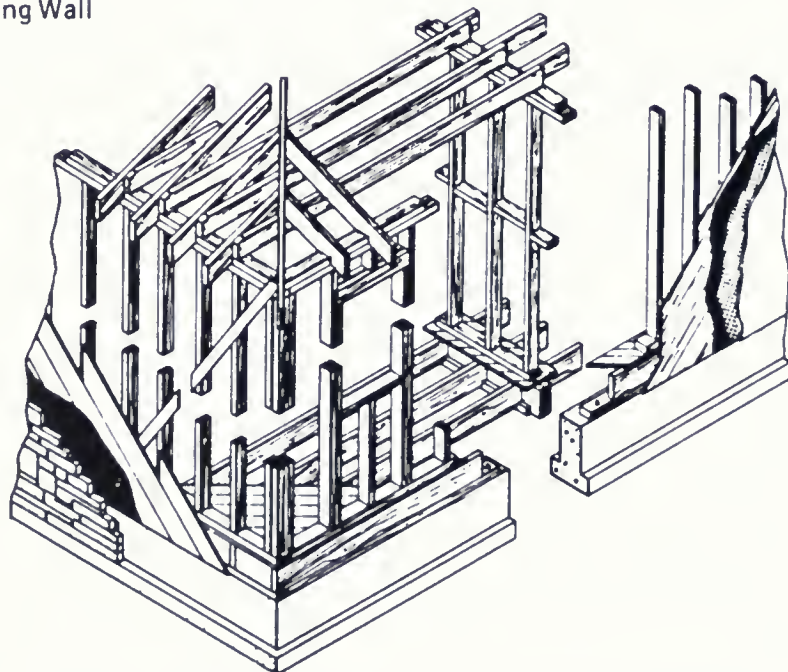
A34.2.1. WOOD FRAME / JOIST / BEAM (Construction Class 1)



Wood Joist and Deck
Brick Load Bearing Wall

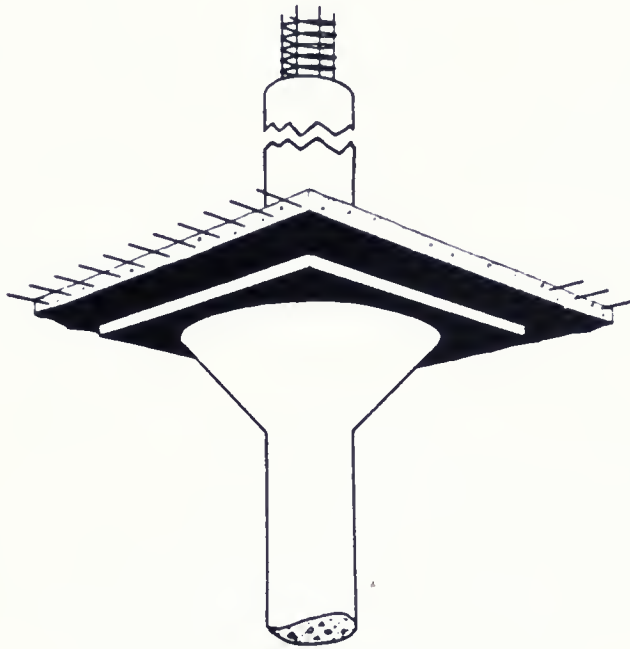


Wood or Steel Truss,
Concrete Block Load Bearing Wall

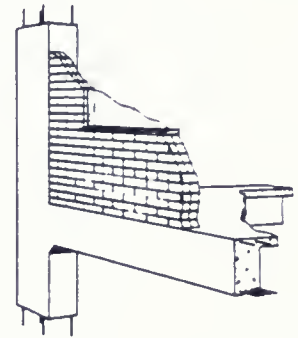


Wood Joist and Rafters, Brick on Wood Frame Wall

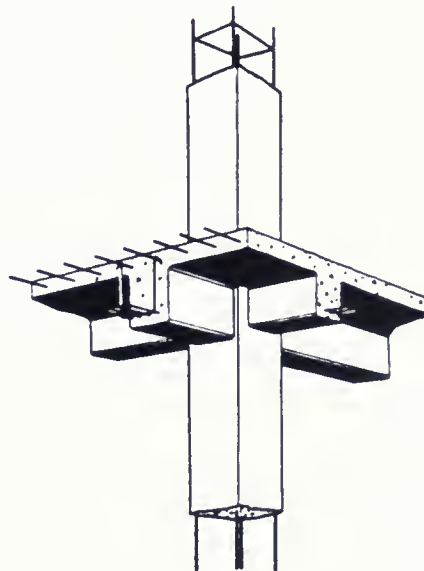
A34.2.2. FIRE RESISTANT (Construction Class 2)



Reinforced Concrete
with Imbedded Steel Rods



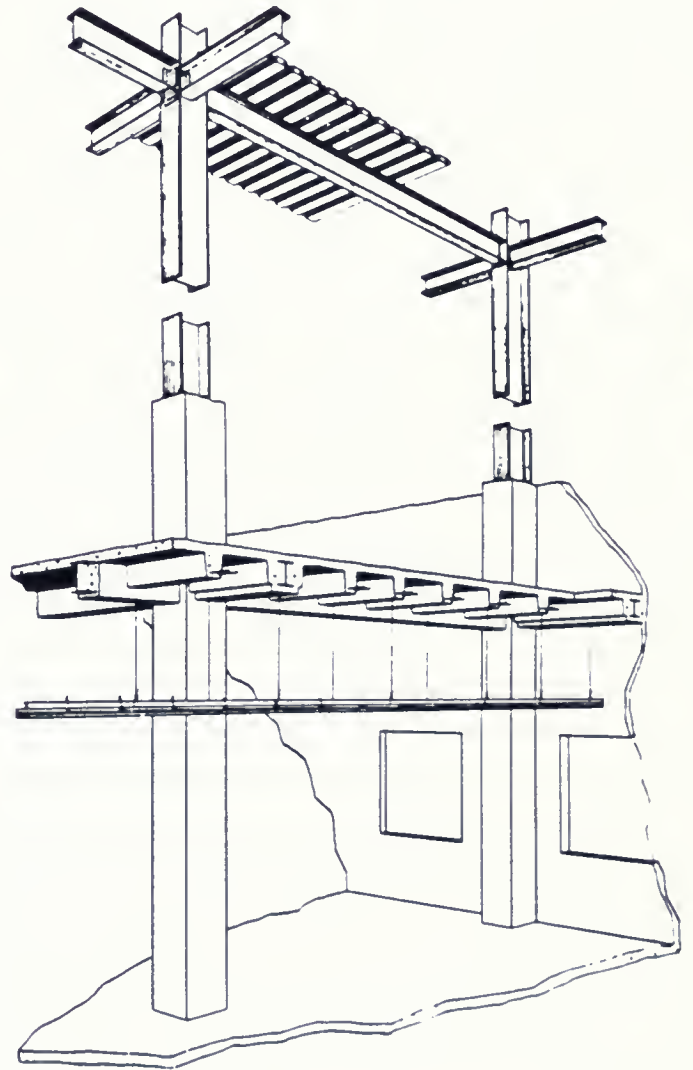
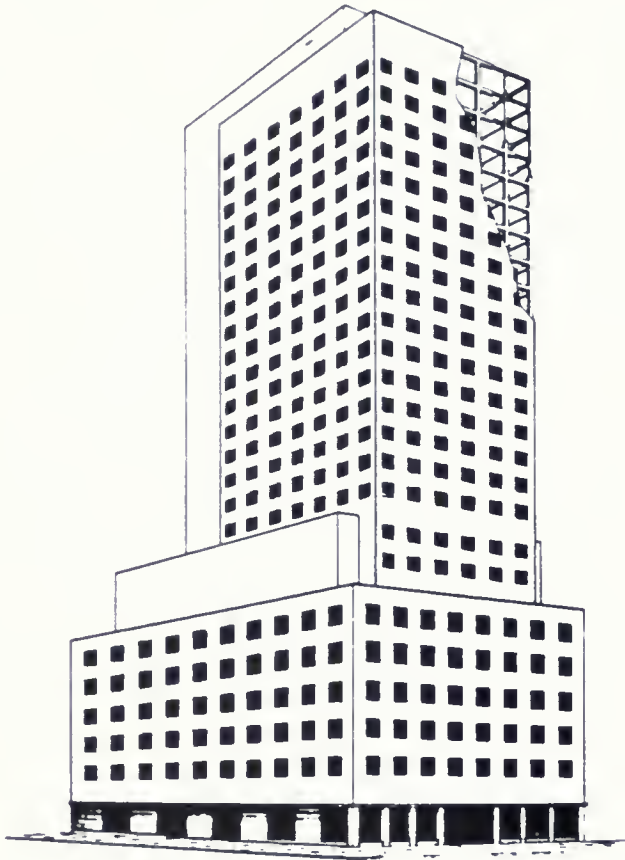
Masonry Curtain Wall



Reinforced Concrete
with Imbedded Steel Rods

PART 3: DATA COLLECTION

A34.2.3. FIRE PROOF (Construction Class 3)

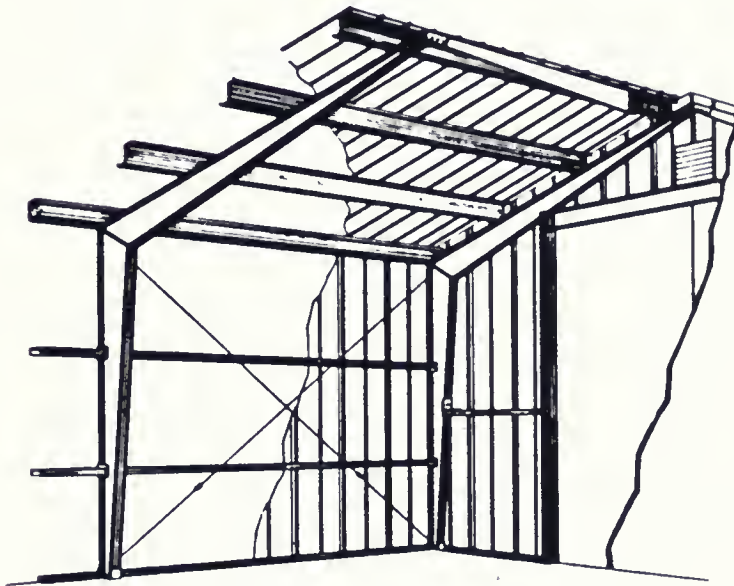


Fire Proofed Steel Frame

A34.2.4. PRE-ENGINEERED STEEL (Construction Class 4)

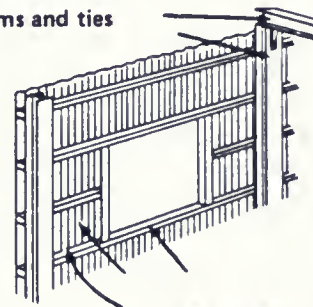


Light Steel Skeleton Frame
with Prefabricated Steel Siding



Light Steel Framing

Columns, beams and ties



Wall cover, girts, and window

35. SKETCH VECTORING

TABLE OF CONTENTS

PARAGRAPH NO. OR FIELD CODE	PARAGRAPH TITLE OR DESCRIPTION OF FIELD	PAGE	PARAGRAPH NO. OR FIELD CODE	PARAGRAPH TITLE OR DESCRIPTION OF FIELD	PAGE
35.1.	CONTENT OF DATA FIELDS	1	35.5.1.	ANGLE COMMAND - V	5
649	DELETE: SKETCH VECTORS	1	35.5.2.	FINISH COMMAND - F	6
651-658	SKETCH VECTORS	1	35.5.3.	OFF-SET COMMAND - S	7
35.2.	DEFINITIONS	2	35.5.4.	POINT COMMAND - P	8
35.3.	SKETCH VECTORING RULES	3	35.5.5.	RECTANGLE COMMAND - X	10
35.4.	PROCEDURE	4	35.6.	COMMON ERRORS ENCOUNTERED IN SKETCHING	11
35.5.	COMMANDS	5			

35.1. CONTENT OF DATA FIELDS

All of the Sketch Vectoring data is contained in one screen. The following list shows the fields in numerical order and describes the data requirements for them. It also shows the number of the screen that contains the field.

649 DELETE: SKETCH VECTORS

Optional RES/COM GPD

This is a computer file maintenance entry and normally will not be utilized on the field card. The purpose of the delete is to remove all data previously entered in the computer for the Sketch Vector fields 651-658. This function is initiated by selecting option "06" from the On-Line Menu of either the Residential or Commercial sub-systems.

651-658 SKETCH VECTORS RES S7 or COM CS

Required entry for residential dwellings.

Optional entry for commercial structures.

Sketch Vectoring can be performed for both residential and commercial structures. The purpose of Sketch Vectoring is to encode the perimeter of a building as a set of vector strings so that the computer can plot a sketch and compute the square foot area of the building. In addition for Commercial buildings, the computer will calculate the perimeter of the building.

The following instructions can be used for sketching both Residential and Commercial buildings. Specific instructions for the different building types follow the general instructions.

There is a slight difference in the terminology used for sketching Residential and Commercial

buildings. The first Residential area that is sketched is the main part of the house. The main part is the dwelling described in the "500 fields". This area is defined as A0 (zero). The remaining areas to be sketched, defined as A1 through A8, are the Additions to the house, as described in fields 601-608.

The first Commercial area that is sketched is the Building Section or Level described on the first Exterior/Interior line, field 611. This area is defined as A0. The remaining areas to be sketched, A1 through A7, are the Building Sections or Levels described on the remaining Exterior/Interior lines, fields 612-618.

There will be complex commercial or industrial buildings to which the simple one-to-one vectoring instructions will not apply. For complex buildings, enter the vectors from the drawn sketch or enter a vector string for each separate part of the sections that are described on the Exterior Data lines. Examples of Commercial Sketch Vectors are shown in the Appendix to this Section.

For the Residential main building or the first Commercial Building Section (both identified as A0), the computer system will put the point of an imaginary pen down on an imaginary piece of

PART 3: DATA COLLECTION

paper to begin drawing the sketch of the area. The "pen" will start at the lower left corner of the building sketch. Then, based on the vector information you enter, the system will move the "pen" to draw the perimeter of the area being entered.

For each Residential addition or subsequent Commercial Building Section, the computer assumes that it will start from the original starting point, the lower-left corner of the main building, and move the "pen" to a new starting point where it will begin to sketch the new Addition or Section. For a Residential dwelling, the system can handle vector information for the basic building and eight additions. Eight Commercial Building Sections or levels can be coded.

Residential Sketches. The areas that are calculated by the Residential Sketch Vector Program are moved to the appropriate dwelling area fields (fields 581 and 582) and will be used in the calculation of the cost and market approach values. Areas that are sketch-vectored will override any areas entered in fields 581 and 582.

Commercial Sketches. The areas and perimeters that are calculated by the Commercial Sketch Vector Program are for descriptive purposes only. Unlike residential sketches, the computer *will not* move the calculated areas and perimeters to the Exterior/Interior Line fields.

35.2. DEFINITIONS

Sketch Vector Identifier	Residential	Identified on Sketch As	Commercial	Identified on Sketch As
A0	Main Body of House	*	1st Section	A
A1	1st addition	A	2nd Section	B
A2	2nd addition	B	3rd Section	C
A3	3rd addition	C	4th Section	D
A4	4th addition	D	5th Section	E
A5	5th addition	E	6th Section	F
A6	6th addition	F	7th Section	G
A7	7th addition	G	8th Section	H
A8	8th addition	H		
Addition	Features of the building that are above, below, or beside the basic structure, such as basements, attached garages, porches, canopies, bays, upper stories, overhangs, or other features that were either built along with the basic structure or added to it at a later date.			
C	Commence - instruction for "pen" down or start drawing.			
D	Down - to instruct the "pen" to move down.			
F	Finish Command - the command used to close a sketch.			
H	Halt - instruction to signify the end of all sketching.			
L	Left - to instruct the "pen" to move left.			
N	No vector string will be entered for <i>that particular</i> addition or section.			
NV	No vectors will be entered at all.			
P	Point Command - to identify a point within a sketch vector string for later reference.			
POB	Point Of Beginning - the point where the drawing of an area began with the <u>Commence</u> instruction. There is a main POB for the entire sketch. It is the POB for the residential main building or first commercial section. In addition, there is a POB for each residential addition or each additional commercial building section sketched.			

R	Right - to instruct the "pen" to move right.	Vector String - A set of vectors that describe an area, for example: U34R50D24L18D10L32 could describe a 1520 square foot main floor area of a house.
S	Offset Point Command - used when sketching different floors of a dwelling	
U	Up - to instruct the "pen" to move up.	X
V	Angle Command - used to draw that part of a building that does not form a 90 degree angle.	Rectangle Command - to complete the description of a rectangular area by continuing clockwise to the Point of Beginning of the Main Building, Addition or Section.
Vector - A line that is described by both a direction and length, for example: up 37 feet is coded U37, or right 23 feet is coded R23.		

35.3. SKETCH VECTORING RULES

- For coding of sketch vectors on the Data Collection Form:

There are three-character positions available for each vector, each descriptor, (A0, A5, etc.), or each command (C, H, etc.). Only alpha characters are allowed in the first-character position. Only numeric characters (or blanks) are allowed in the last two character positions.

For commercial vectors, when the distance is a 3-digit number, enter the direction in the first position and the distance in the next 3-position field.
- All sketches will have one *main* Point Of Beginning; the lower left-hand corner of the residential Main Building or first commercial Section. All other vector strings for Additions or additional Sections, will begin from this point.
- All vector strings must return to the POB of the individual vector string. This means that each Main body, Addition, or Section vector string must "close". The Finish Command may be used to complete a vector string.
- Outside dimensions required to position an Addition or Section may not always be shown and may have to be calculated from other dimensions shown on the sketch, or will have to be determined by the data collector in the field.
- A maximum of 30 characters (including spaces) may be entered on each line of sketch data.
- Each Addition or Section (A1, A2, A3, etc.) may be started on a new line. This will be an aid for easier future maintenance. However if needed because of lengthy vector strings, it is possible to begin the next vector string on the same line as another vector string, even in the middle of the sketch line.
- A maximum of eight Residential Additions is permitted.
- Residential - The maximum continuous dimension allowed for any length or width is 99 feet. To enter any dimension in excess of 99 feet, use two vector strings to describe the area. Commercial - The maximum continuous dimension is 999 feet.
- If no vectors are to be entered, enter the instruction "NV", No Vectors, in the first two positions on the first line of entry.
- If for some reason an Addition is not to be sketched, (for example: too complex, or its circular in shape), enter the Addition Identification (A1, A2, etc.) and the instruction "N", no addition vectors. The area of the addition will have to be manually calculated and entered in the appropriate field.

35.4. PROCEDURE

1. Determine the POB or starting point of the main body of the building. This is always the lower left corner of the sketch of the main building, (the southwest corner).
2. The identifier for the main body of the building (A0) and the instruction meaning "pen" down, Commence is pre-printed in its proper position on first line of the Sketch Vector block of the Residential Data Collection Form. This entry will have to be coded on the Commercial Data Collection Form.
3. When you begin entering the vector data into the system, enter "A0C" as the first three characters on the first line. This instruction tells the computer to Commence drawing the main body of the building, "A0". The only exception is to enter "NV", no vector, if there are to be no vector entries.
4. Enter the balance of the required vectors to completely enclose the main body of the improvement, and return to the POB. When the vector string is closed, the imaginary "pen" will automatically "rise".
5. Vector all rectangular sections of the sketch by using the Rectangle Command, "X". See the Command Section of these instructions for use of the "X" command. Use of the "X" command not only simplifies closure of sections, but also saves time and reduces the size of vector strings.
6. If more than 30 spaces are required to vector any portion of the sketch, complete the vector string on the following line.
7. Enter the Addition Identification Number (A1, A2, etc.) and then the vector string required to place the "pen" at the POB of the Addition or Section. It is necessary to instruct the computer to go from the *main* POB to the POB of the Addition or Section.

Another method to move the "pen" to the beginning of an Addition or Section is to use the Point Command. See the Command Section of these instructions for use of the "P" command.

Remember: all vectoring starts from the lower left corner (the *main* POB) of the main improvement (for Commercial structures - the first Section entered).

NOTE: Once you have become proficient in vectoring, it is often desirable to "shortcut" outside or through the main body of the improvement to reach the POB of an addition. By following this practice, the POB can be reached with a maximum of two vectors. This may often be simpler than following the perimeter of the dwelling to the POB of the addition, but extreme caution should be used since the distance of these vectors may not be readily identifiable from the sketch.

8. When the POB of the Addition or Section is reached, enter the instruction Commence, and then enter the balance of vectors required to completely enclose the Addition and return to the POB of the addition.
9. In the event that there is an angle in the addition, two options are available. First, if the addition is trapezoidal you may square the addition by using the average length of the parallel sides and vector the addition as a rectangle. Second, you may choose to use the Angle Command, "V". See the Command Section of these instructions for use of the "V" command.
10. Enter the vectors required for the balance of the Additions or Sections in order (A2, A3, etc.). Each addition may be started on a separate line (Residential: 652, 653, 654, etc.).
11. After all vectors for the main body and all additions (for Commercial structures - all Exterior/Interior Lines) are entered, enter the instruction Halt, to indicate all the vector strings are completed. The Halt instruction must be the last entry made in the sketch vector area. Only one "H" may be entered.

35.5. COMMANDS

The examples following each of the Command descriptions have the various commands underscored so you can find them more easily.

35.5.1. ANGLE COMMAND - V

The Angle Command, "V", is used to draw that part of a building that does not form a 90 degree angle. The Angle Command consists of "V" and a pair of vectors (direction and distance) entries. The angled distance is calculated as the diagonal of the rectangle described by the entries following the "V".

The Angle Command can be effectively used for most angles. However, because of the limitations of computer terminals and printers, the display of the angle on the terminal and paper copy is not shown. Rather the ends of the angled line are marked with 'X's' and a number designating the length is displayed between them. The accuracy of the area calculations will not be affected by the limitations of the display equipment.

Example - (See Figure 35-1)

Main Building Vector String with the Angle Command ("V"):
AOCU40R20VU10R10R20VD10R10FH

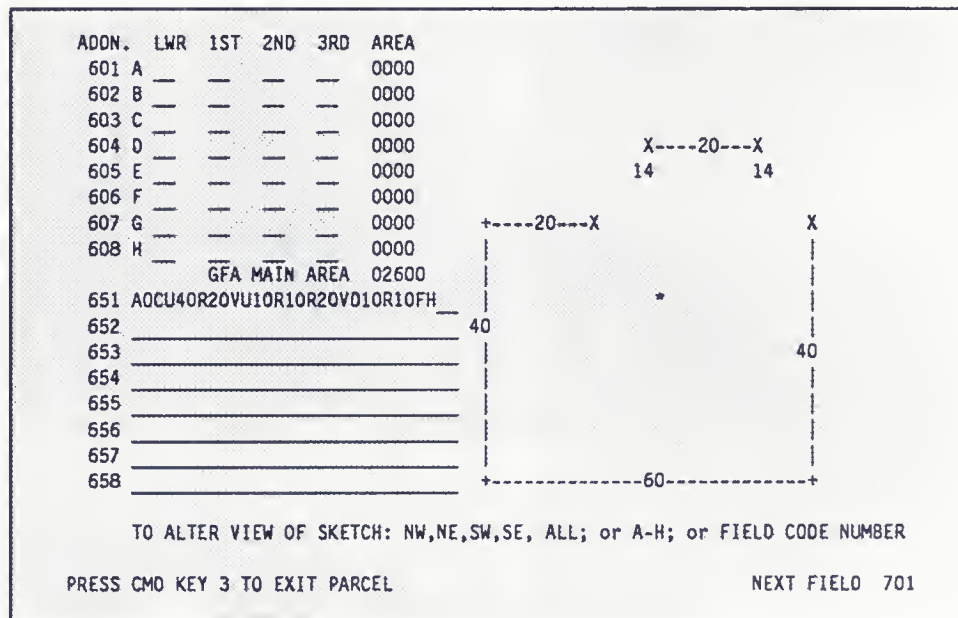


Figure 35-1. Use of the Angle Command.

35.5.2. FINISH COMMAND - F

The Finish Command allows you to complete a vector string without entering the last two vectors necessary to close the sketch. This command causes the system to calculate the last two direction/distance entries. The result is automatic closure of the vector string. The Finish Command can be very useful when vectoring irregular shapes with lengthy vector strings.

The use of the Finish Command can save five keystrokes over the standard commands used to close a sketch.

Example - (See Figure 35-2.)

Main Building Vector String with the Finish Command:
A0CU20R5U20R10D10R10F

Main Building Vector String without the Finish Command:
A0CU20R5U20R10D10R10D30L25

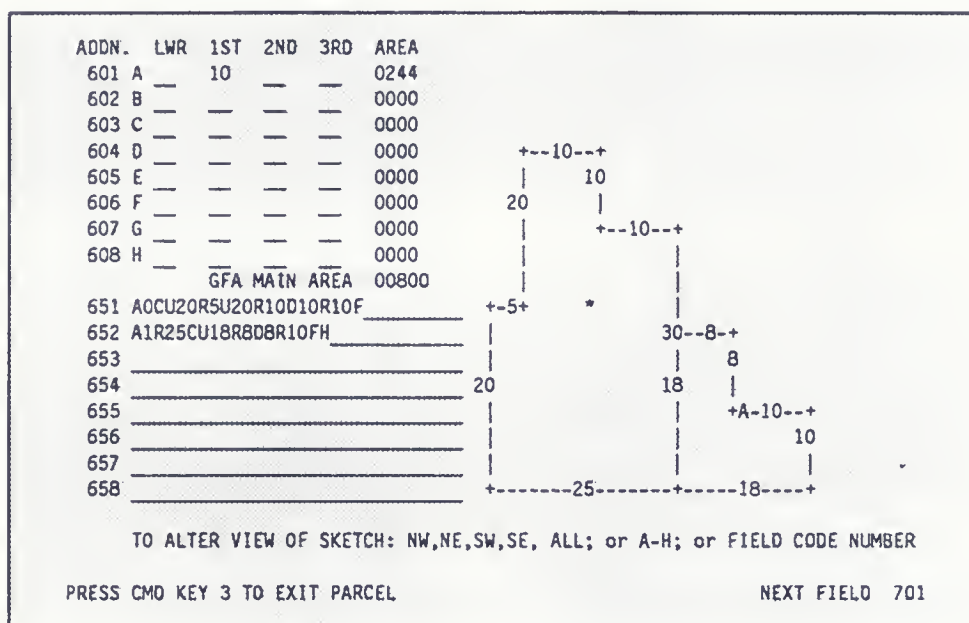


Figure 35-2. Use of the Finish Command.

35.5.3. OFF-SET COMMAND - S

The Off-Set Command is designed so that the lower and upper story areas of a building can be separated from the main floor to be better displayed on the screen or when printed. This is an advantage if those areas are complex or not the same shape as the main floor of the structure.

The Off-Set Command is always followed by a vector, a direction and distance. The vector instructs the computer in what direction and how far from the off-set point to sketch the addition. The next instruction is Commence and then the vector string describing the addition.

The sketch program will display an "S" where the off-set begins. The distance and direction of the off-set is up to your preference and experience.

A sketch may have several Off-Set Commands, one for the upper floor and one for the lower level. However, you should be careful with too large of off-sets, because of the automatic scaling of the sketching program. The sketch may become too small to be of use to you. The size of the sketch will not affect the area calculations.

Example - (See Figure 35-3)

Addition Vector string (A1) with the Off-Set Command:
A1U5R15SU40CU30R15D10R15D20L30H

NOTE: In this example the second floor area is coded as an addition because the second floor area is significantly different than the first floor area. In cases like this, where the upper floor is coded as an addition, be sure to set the USE STORY HEIGHT INDICATOR to "N" so that the calculated upper floor area is not doubled.

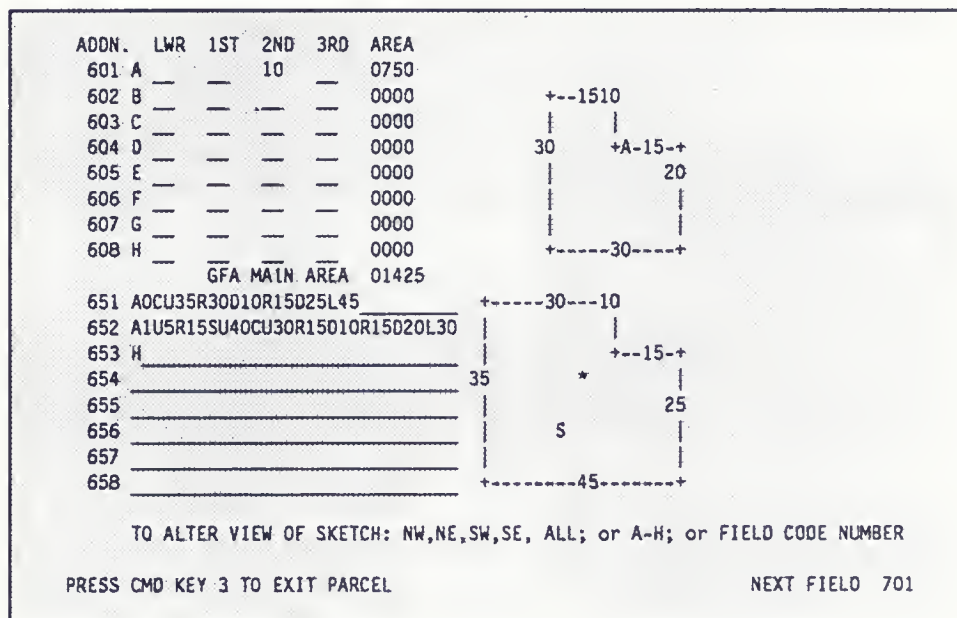


Figure 35-3. Use of the Off-Set Command.

PART 3: DATA COLLECTION

35.5.4. POINT COMMAND - P

The Point Command gives you the ability to code the location of various points of the main structure, Additions, or Sections that will be used for later reference.

The format of this command is Pn . The number n can be any number from 0 (zero) through 7. The n numbers must be assigned in order beginning with 0, and continuing in sequence with no skipping of numbers.

The first time that a Pn command is used will assign that location of the sketch to that Pn number. The second and subsequent use of that Pn number, moves the "pen" to that previously assigned location of the sketch. The "pen" may be in either the "up" or "down" position depending on what you need to be done.

While the n numbers must be assigned in order, they can be used in any order after they are assigned.

The Point Command can be used to either "trace backward" or "trace forward" depending on the need.

Pen "Up" Example - (See Figure 35-4.)

When sketching a main building with three additions, the POB of each addition may be described as P0, P1, and P2. Then when it is necessary to move the "pen" from the *main* POB of the main building to the POB of the addition, all you need to enter is the Pn .

Vectors:

```
A0CU35P0R30P1D10R15P2D25L45
A1P1CR8X10
A2P2CR8X15
A3P0CU4X25H
```

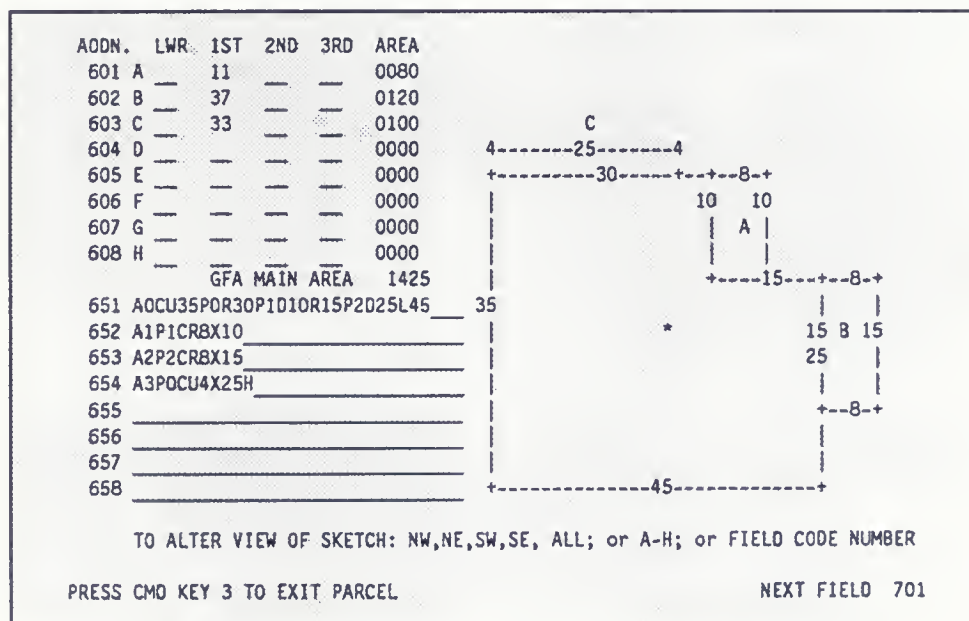


Figure 35-4. Use of the Point Command in the "Pen Up" Mode.

Pen "Down" Example - (See Figure 35-5.)

A house that is built on a sloped lot with the rear lower level exposed, has a deck that wraps around two sides of it. The POB of the deck and a corner of the deck that join the house are both identified with a Point. The Point

describing the POB of the addition will be used twice. First to move the "pen" from the *main* POB to the addition POB. And secondly, to "trace backward" that portion of deck that adjoins the house.

Vectors:

A0CU35P0R30D10R15D25P1L45
A1P0CU12R40D14R13D33L8P1P0H

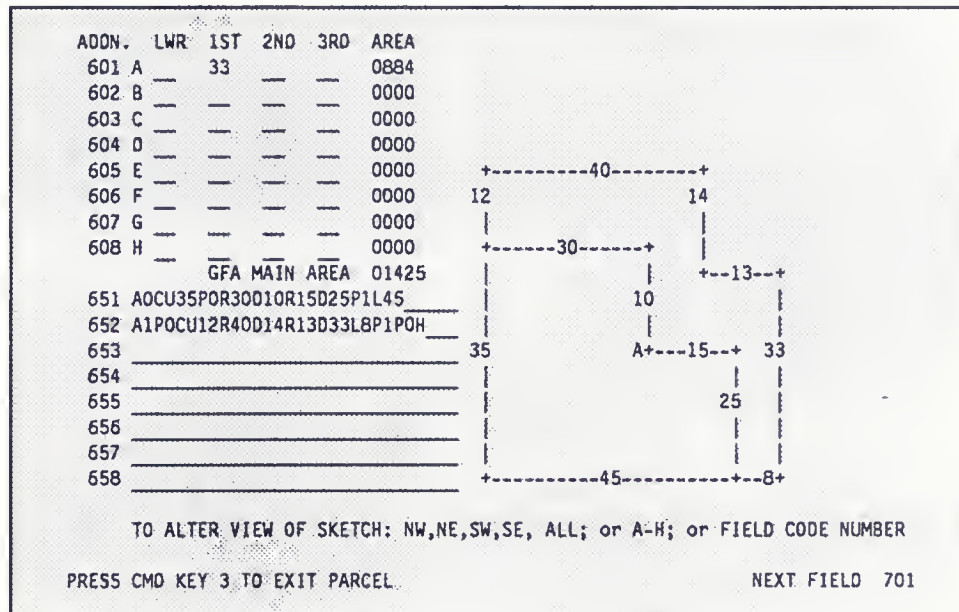


Figure 35-5. Use of the Point Command in the "Pen Down" Mode.

PART 3: DATA COLLECTION

35.5.5. RECTANGLE COMMAND - X

The Rectangle Command, "X", allows you to sketch a rectangular area, either main building, Addition, or Section by entering only two sides of the area. Use of the "X" command not only simplifies closure of these areas, but also saves time and reduces the size of vector strings.

To use the "X" command, position the "pen" at the corner of the area to be sketched. Then enter Commence; a vector, a direction (U, D, L, or R) and distance; an "X"; and finally, the distance of the next clockwise side of the rectangle.

Example - (See Figure 35-6.)

A concrete block corner grocery store built in 1949 has two recent additions added to the building. The first is a 10' x 35' glass front entry way and the second is a 15' x 20' metal receiving area at the rear of the building.

Vectors:

A1D10R10CU10X35
A2U30R5CU15X20

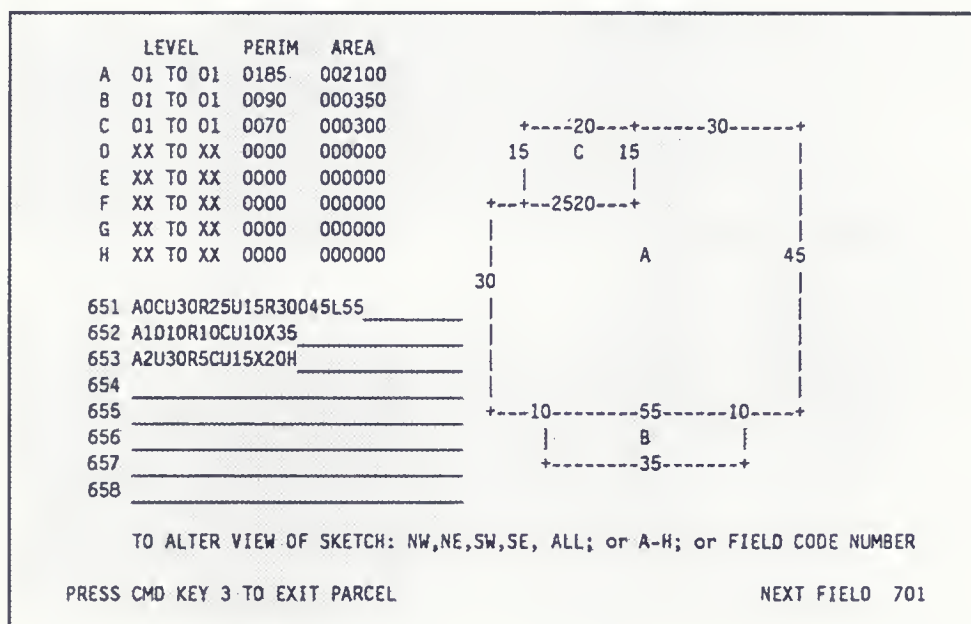


Figure 35-6. Use of the Rectangle Command.

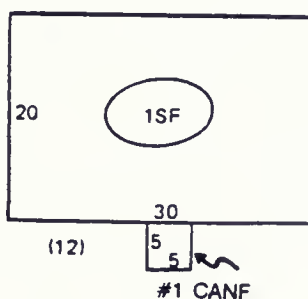
35.6. COMMON ERRORS ENCOUNTERED IN SKETCHING

1. Missing Halt.
2. Total of Down dimensions not equal to total of Up dimensions.
3. Total of Right dimensions not equal to total of Left dimensions.
4. Missing Commence in vector string.
5. More than one Commence in vector string.
6. First character after Commence is not alpha.
7. First character in vector string not Addition Identification.
8. Second character in vector string not numeric (1-8).
9. Second character in vector string greater than 8.
10. Two continuous vectors showing no change in direction.
11. Addition Identification numbers not sequential - for example, A6 must follow A5.
12. Residential Additions:
 - a. Addition sketched, but with no corresponding description in fields 601-608.
 - b. Conversely, addition described, but with no corresponding vector strings in fields 652-658.

A35. SKETCH VECTOR EXAMPLES

The following examples demonstrate how to properly code additions and vector sketches, making effective use of the different vector commands. Each example includes a sample sketch as it might be drawn and labeled on the property record card. The appropriate addition entries and a correct set of sketch vectors have been recorded.

TYPICAL SKETCH VECTOR EXAMPLE NO. 1



Canopy

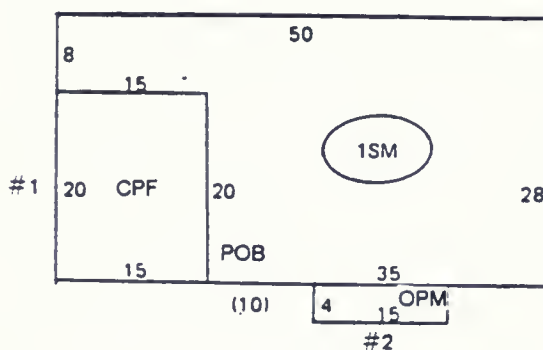
ADDITIONS													
ADD	CD	LWR	1ST	2ND	3RD	AREA	ADD	CD	LWR	1ST	2ND	3RD	AREA
601-A	A1		32				605-E	A5					
602-B	A2						606-F	A6					
603-C	A3						607-G	A7					
604-D	A4						608-H	A8					
SKETCH VECTORS													
651	A,OC	4	20	X	30								
652	A,1	R	12	C	R	5	X	5	H				
653													
654													
655													
656													
657													
658													

A - ADDITION
 C - COMMENCE
 O - DOWN
 F - FINISH
 N - HALT
 L - LEFT
 NV - NO VECTOR
 P - POINT
 R - RIGHT
 S - OFFSET
 U - UP
 V - ANGLE
 X - RECTANGLE SYMBOL

PART 3: DATA COLLECTION

TYPICAL SKETCH VECTOR EXAMPLE NO. 2

This example demonstrates the use of the Finish command, using "F" in place of the last two vectors "D28L35" within the A0 vector string.

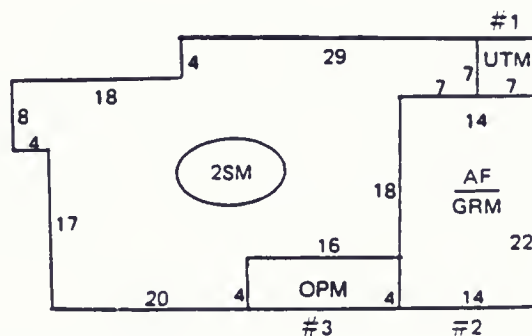


ADDITIONS															
ADD	CD	LWR	1ST	2ND	3RD	AREA	ADD	CD	LWR	1ST	2ND	3RD	AREA	ADDITION CODES	
601-A	A1		30				605-E	A8						10 ISF	24 EPM
602-B	A2		21				606-F	A8						11 OPF	25 UTM
603-C	A3						607-G	A7						13 COPF	26 SAYM
604-D	A4						608-H	A8						14 EPF	30 CPF
														15 UTF	32 CARF
														16 SAYF	33 O-WD
														18 GRF	50 BU
														20 ISM	91 MHA
														21 OPM	92 MET
														23 COPM	98 MV

SKETCH VECTORS															
651	A,0C	U20	L15	U8	R50	F									
652	A1	C	L15	X,20											
653	A,2	R10	C	R15	X,4	H									
654															
655															
656															
657															
658															

A	-	ADDITION
C	-	COMMENCE
D	-	DOWN
F	-	FINISH
H	-	HALT
L	-	LEFT
MV	-	NO VECTOR
P	-	POINT
R	-	RIGHT
S	-	OFFSET
U	-	UP
V	-	ANGLE
X	-	RECTANGLE SYMBOL

TYPICAL SKETCH VECTOR EXAMPLE NO. 3



Note: Additions should (not must) be numbered clockwise.

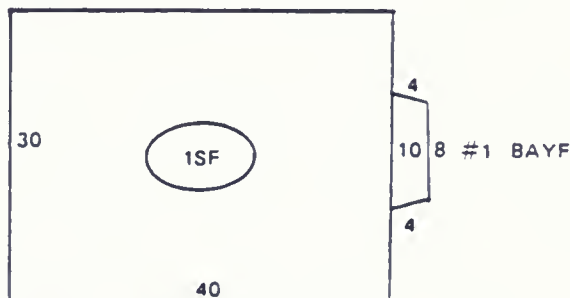
ADDITIONS														
AOD	CO	LWR	1ST	2ND	3RD	AREA	AOD	CO	LWR	1ST	2ND	3RD	AREA	ADDITION CODES
601-A	A1		25				605-E	A5						10 ISF 24 EPM 11 OPF 25 UTM 13 COPF 26 BAYM 14 EPF 30 CPF 15 UTF 32 CANF 16 BAYF 33 O-WO 19 GRF 50 BU 20 ISM 91 MHA 21 OPM 92 MET 23 COPM 99 MV
602-B	A2		29	18			606-F	A6						
603-C	A3		21				607-G	A7						
604-D	A4						608-H	A8						

SKETCH VECTORS																				
651	A	OC	U	17	L	4	U	8	R	18	U	4	R	29	D	7	L	7	D	18
652		L	16	D	4	L	20													
653		A	1	R	43	U	22	C	U	7	X	7								
654		A	2	R	36	C	U	22	X	14										
655		A	3	R	20	C	U	4	X	16	H									
656																				
657																				
658																				

A	-	ADDITION
C	-	COMMENCE
O	-	DOWN
F	-	FINISH
H	-	HALT
L	-	LEFT
NV	-	NO VECTOR
P	-	POINT
R	-	RIGHT
S	-	OFFSET
U	-	UP
V	-	ANGLE
X	-	RECTANGLE SYMBOL

PART 3: DATA COLLECTION

TYPICAL SKETCH VECTOR EXAMPLE NO. 4

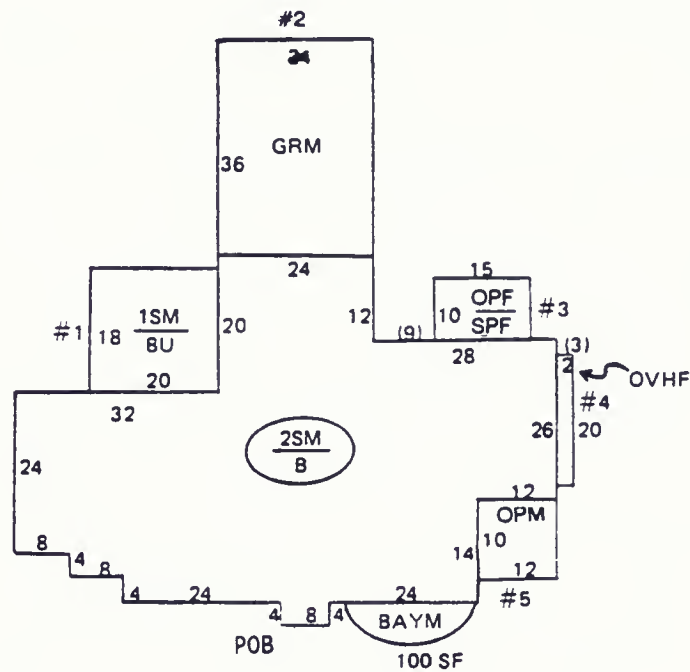


Square off minor angle in addition # 1
and enter as rectangle - 4 x 9

ADDITIONS													
ADD	CD	LWR	1ST	2ND	3RD	AREA	ADD	CD	LWR	1ST	2ND	3RD	AREA
601-A	A1		16				605-E	A5					
602-B	A2						606-F	A6					
603-C	A3						607-G	A7					
604-D	A4						608-H	A8					
SKETCH VECTORS													
651	A,OC	4,30	X,40										
652	A1	R,40	U,10	C		U,9	X,4	H					
653													
654													
655													
656													
657													
658													

A - ADDITION
C - COMMENCE
D - DOWN
F - FINISH
N - HALT
L - LEFT
NV - NO VECTOR
P - POINT
R - RIGHT
S - OFFSET
U - UP
V - ANGLE
X - RECTANGLE SYMBOL

TYPICAL SKETCH VECTOR EXAMPLE NO. 5



ADDITIONS														
AOD	CD	LWR	1ST	2ND	3RD	AREA	AOD	CD	LWR	1ST	2ND	3RD	AREA	ADDITION CODES
601-A	A1	50	20				605-E	A5		21				10 ISF 24 EPM 11 OPF 25 UTM
602-B	A2		29				606-F	A6		26			100	13 COPF 26 BAYM 14 EPF 30 CPF
603-C	A3		13	11			607-G	A7						15 UTF 32 CANF 16 BAYF 33 DWD
604-D	A4			16			608-H	A8						19 GRF 50 BU 20 ISM 31 MHA 21 OPM 32 MET 23 COPM 39 MV

SKETCH VECTORS										
851	A, O, C	U, 4	L, 24	U, 4	L, 8	U, 4	L, 8	U, 24	R, 32	U, 20
852	R, 24	D, 12	R, 28	D, 26	L, 12	D, 14	L, 24	D, 4	L, 8	
853	A, 1	L, 28	U, 36	C	U, 18	X, 20				
854	A, 2	L, 8	U, 56	C	U, 36	X, 24				
855	A, 3	R, 25	U, 44	C	U, 10	X, 15				
856	A, 4	R, 44	U, 21	C	U, 20	X, 2				
857	A, 5	R, 32	U, 8	C	U, 10	X, 12				
858	A, 6	M, H								

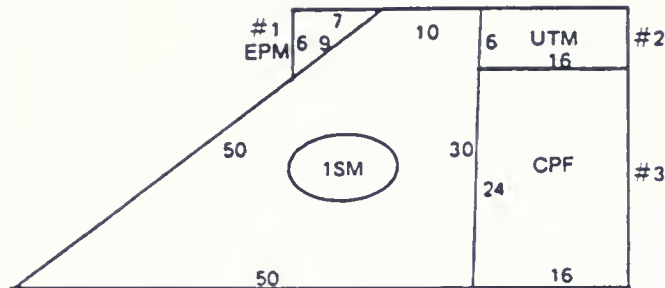
A	ADDITION
C	COMMENCE
D	DOWN
F	FINISH
N	- HALT -
L	- LEFT
NV	- NO VECTOR
P	- POINT
R	- RIGHT
S	- OFFSET
U	- UP
V	- ANGLE
X	- RECTANGLE SYMBOL

A ADDITION
 C COMMENCE
 D DOWN
 F FINISH
 H HALT
 L LEFT
 MV NO VECTOR
 P POINT
 R RIGHT
 S OFFSET
 U UP
 V ANGLE
 X RECTANGLE
 SYMBOL

PART 3: DATA COLLECTION

TYPICAL SKETCH VECTOR EXAMPLE NO. 6

Improvement and addition with angles in the sketch. In this case, the diagonal line will be represented by X's at each end of an imaginary (diagonal) line. The length of the line will be positioned between the two X's.



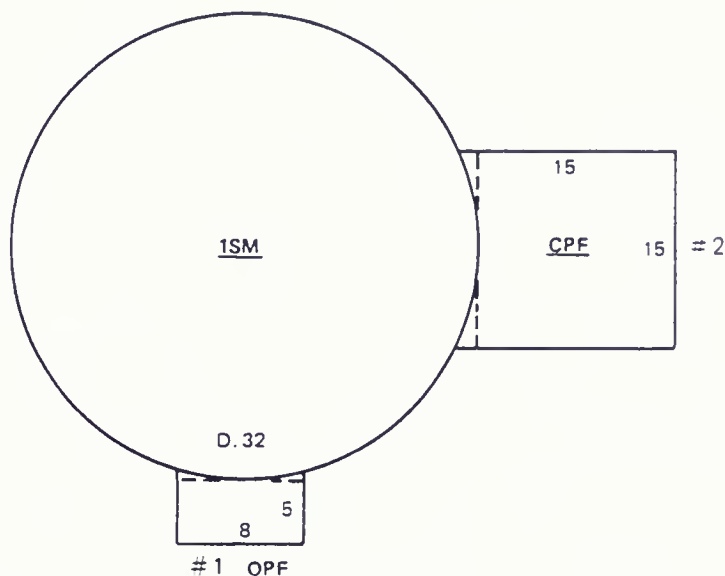
ADDITIONS													
ADD	CD	LWR	1ST	2ND	3RD	AREA	ADD	CD	LWR	1ST	2ND	3RD	AREA
601-A	A1		24				605-E	AS					
602-B	A2		25				606-F	AM					
603-C	A3		30				607-G	A7					
604-D	A4						608-H	AE					
ADDITION CODES													
10	ISF	24	EPM										
11	OPF	25	UTM										
13	COPF	26	BAYM										
14	EPF	30	CPF										
15	UTF	32	CANF										
18	BAYF	33	DWD										
19	GRF	50	BU										
20	ISM	91	MHA										
21	OPM	92	MET										
23	COPM	99	MV										

SKETCH VECTORS													
NO	ADD	CD	LWR	1ST	2ND	3RD	AREA	ADD	CD	LWR	1ST	2ND	3RD
651	A1	E	V	430	R	40	R10	F					
652	A1			424	R	33	C	46	R	7	V	D6	L7
653	A2			R50	U	24	C	46	X	16			
654	A3			R50	C			424	X	16	H		
655													
656													
657													
658													

A	ADDITION
C	COMMENCE
D	DOWN
F	FINISH
H	HALT
L	LEFT
MV	NO VECTOR
P	POINT
R	RIGHT
S	OFFSET
U	UP
V	ANGLE
X	RECTANGLE SYMBOL

SPECIAL SKETCH VECTOR EXAMPLE

Improvement and additions including circular design. In this case, a representative computer diagram and computer-generated area will not be developed.



In such cases as this, the following rules apply:

1. Do not enter any sketch vectors in fields 651 through 658.
2. Enter the manually computed living areas of the improvement in field 581 - Total Floor Area. Enter right-justified with leading zeros.

Example:

	BSMT	1ST FLOOR	2ND FLOOR	ADD FLOOR	HALF	ATTIC
581		0804				
	TOTAL FLOOR AREA					

3. Enter the following first line for vectors (651): "NV" which stands for No Vectors. This entry should be made directly over the pre-printed A0C, as shown in the example below:

Example:

SKETCH VECTORS									
651	NV								

4. Enter BOTH the Addition codes AND the manually computed areas of each addition that does not represent living area in the 'Additions' area of the sketch vector sheet.

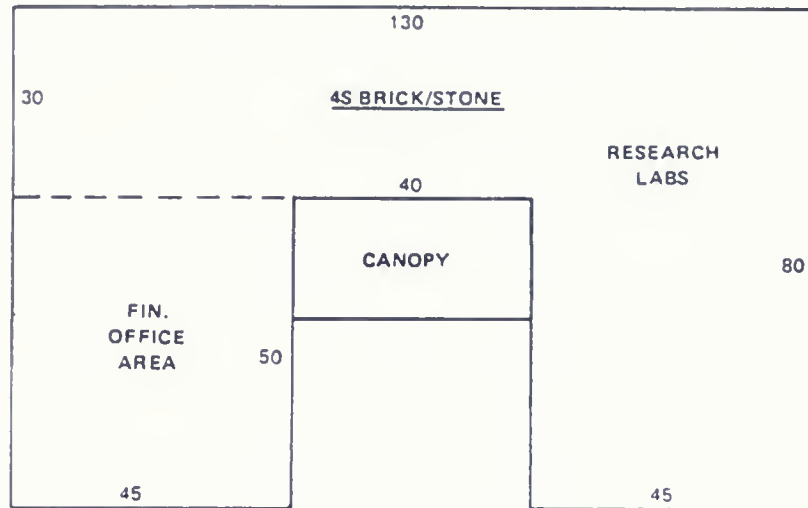
Example:

ADDITIONS						
ADD	CD	LWR	1ST	2ND	3RD	AREA
601-A	A1		21			40
602-B	A2		30			215

NOTE: In the case where an improvement and its additions can be vectored with the exception of a minor addition, it is desirable to either make the minor addition "square" or to handle it as an 'N' addition rather than to "NO VECTOR" the improvement and all additions. See Example Number 5.

PART 3: DATA COLLECTION

COMMERCIAL SKETCH VECTOR EXAMPLE NO. 1



A simple commercial building that includes office area and research laboratories.

EXTERIOR DATA										
	SEC NO	LEVELS		DIMENSIONS		USE TYPE	WALL HGHT	EXT WALL	CONST CLASS	% NET GROSS
		FROM	TO	SIZE	PERIMETER					
611	1	01	01	45 x 50	---	082	---	---	---	---
612	1	01	01	---	---	084	---	---	---	---
613	1	02	04	---	---	084	---	---	---	---
614	---	---	---	---	---	---	---	---	---	---
615	---	---	---	---	---	---	---	---	---	---
616	---	---	---	---	---	---	---	---	---	---
617	---	---	---	---	---	---	---	---	---	---
618	---	---	---	---	---	---	---	---	---	---

SKETCH VECTORS										
651	A	OC	450	X	45					
652	A	1	450	C	430	R	130	D	80	L
653	H									
654										
655										
656										
657										
658										

A ADDITION

C COMMENCE

D DOWN

F FINISH

N HALF

L LEFT

NV NO VECTOR

P POINT

R RIGHT

S OFFSET

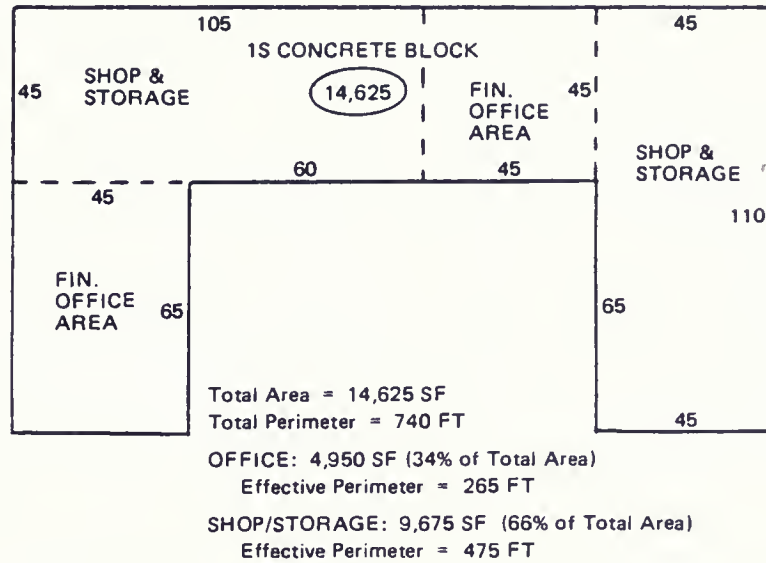
U UP

V ANGLE

R RECTANGLE SYMBOL

COMMERCIAL SKETCH VECTOR EXAMPLE NO. 2

A complex commercial building that includes separated Office Areas and separated Shop and Storage Areas.



Options: 1. Vector each separate section as a string.

SKETCH VECTORS									
651	A0	C	465	X	45				
652	A1	U65	C	445	X	105			
653	A2	U65	R	105	C	445	X	45	
654	A3	R	150	C	4	110	X	45	H

2. Vector the building, as a whole, from the drawing.

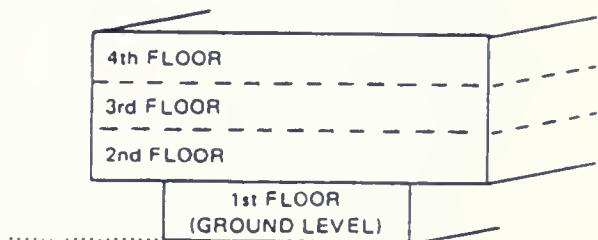
SKETCH VECTORS									
651	A0	C	U	110	R	195	D	110	L45
652	L	105	F	H					

PART 3: DATA COLLECTION

COMMERCIAL SKETCH VECTOR EXAMPLE NO. 3

A commercial office building whose upper floors extend beyond the size of the first floor. The Off-Set command is used to direct the computer to the area in which to draw the upper stories.

15	3S MASONRY & GLASS OPEN AREA	2,250
50	4S MASONRY & GLASS	7,500
150		
15	3S MASONRY & GLASS OPEN AREA	2,250



EXTERIOR DATA										
	SEC NO	LEVELS		DIMENSIONS		USE TYPE	WALL HGHT	EXT WALL	CONST CLASS	% NET GROSS
		FROM	TO	SIZE	PERIMETER					
611	1	01	01	050, x, 0150	----	053	---	---	---	---
612	1	02	04	080, x, 0150	----	053	---	---	---	---

SKETCH VECTORS										
651	AOC	450	X	150						
652	A1	D155	470	C	480	X	150	H		
653										

A ADDITION
 C COMMENCE
 O DOWN
 F FINISH
 N HALT
 L LEFT
 RV NO VECTOR
 P POINT
 R RIGHT
 S OFFSET
 U UP
 V ANGLE
 X RECTANGLE SYMBOL

36. INCOME AND EXPENSE DATA

TABLE OF CONTENTS

<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>	<u>FIELD CODE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
101	PROPERTY TYPE	1	269	APARTMENT FEATURES	3
102	IMPROVEMENT CLASS CODE	1	271	PARKING	3
104	ZONE	1	272	VACANCY	4
105	NEIGHBORHOOD	1	273	INSURANCE EXPENSE	4
201-203	SALES DATA	1	274	PROPERTY TAX EXPENSE	4
210	EQUITY	1	275	MAINTENANCE EXPENSE	4
220	POTENTIAL GROSS INCOME	2	276	INTERIOR MAINTENANCE EXPENSE	4
230	BUILDING DATA	2	277	EXTERIOR MAINTENANCE EXPENSE	4
231-238	GENERAL RENT INFO	2	278	ELEVATOR EXPENSE	4
251	ROW / HALL / BOTH	2	279	UTILITY EXPENSE	4
252	TOTAL NUMBER OF UNITS	2	280	RESERVE FOR REPLACEMENT	4
253	TOTAL NUMBER OF ROOMS	2	281	MANAGEMENT EXPENSE	5
254	TOTAL NUMBER OF BEDROOMS	3	282	GENERAL EXPENSE	5
255	AVERAGE SQFT / UNIT	3	283	MISCELLANEOUS EXPENSES	5
256	MAJOR RENOVATION	3	291-292	NOTES	5
261-266	APARTMENT UNIT BREAKDOWN	3	600	STRUCTURE TYPE	5
268	APARTMENT AMENITIES	3			

CONTENT OF DATA FIELDS

All of the Income and Expense data is contained in two screens. The following list shows the fields in numerical order and describes the data requirements for them. It also shows the number of the screen that contains the field.

101	PROPERTY TYPE	I&E S1	201-203	SALES DATA	I&E S1
	Required			Optional	
	Please see Section 32 for instructions to code this field.			Please see Section 32 for instructions to code this field.	
102	IMPROVEMENT CLASS CODE	I&E S1	210	EQUITY	I&E S1
	Required			Optional	
	Please see Section 32 for instructions to code this field.			EXPENSES - Enter in this field the normal stabilized expenses associated with the rental use of this property. In order for this information to be usable it should reflect the typical allocation of expenses for the type of structure. Adjustments should be made to actual expenses to reflect only those typically paid by the owner of this type of property.	
104	ZONE	I&E S1		NET INCOME - Enter in this field the stabilized net income for this property, reflecting market rents, stabilized occupancies, and stabilized expenses.	
	Optional				
	Please see Section 32 for instructions to code this field.				
105	NEIGHBORHOOD	I&E S1			
	Required				
	Please see Section 32 for instructions to code this field.				

PART 3: INCOME AND EXPENSE DATA

220 POTENTIAL GROSS INCOME I&E S1 Optional

Enter the potential annual gross income of the property based upon the gross area of all major structures on the property or on all rental units on the property.

230 BUILDING DATA I&E S1 Optional

Several approaches may be taken in listing the rental areas within a parcel. If multiple structures are involved, multiple I&E records may be used. However, it is recommended to facilitate manual and computer assisted analysis, that the values entered in this field reflect the parcel as a whole.

GROSS AREA - Enter the gross leasable area of rental space in all major structures on the parcel.

NUMBER OF FLOORS - Enter the number of floors or stories in the major structure on the parcel.

YEAR BUILT - Enter the last three digits of the year built for the predominate structure on the parcel.

231-238 GENERAL RENT INFO I&E S1 Optional

This section is provided to record actual office, retail, and other rents on a per square foot basis. Rents can be on either a gross rentable area (GRA) or net rentable basis (NRA) basis. In addition, the rents recorded may either be on a monthly or yearly basis. However, the information collected must be consistent across all properties.

FLOORS - Enter the FROM and TO floors of the leased floors, for example 01 - 01, or B1 - B1. See the instructions in the Commercial/Industrial CAMA Data Section for additional information on this entry.

USE TYPE - Enter the USE TYPE code for the leased area. See the instructions in the Commercial/Industrial CAMA Data Section for the appropriate codes.

DATE - Enter the last two digits of the year in which the lease was originated.

TERM - Enter the total number of years of the lease.

ACTUAL RENT - Enter either the annual or monthly actual per square foot rent. Be careful to consistently record rents for all properties in terms of GRA versus NRA and annual versus monthly.

SIZE - Enter the total square feet of leased space.

AREA CODE - Enter the code that best describes the recorded SIZE of the leased space.

- 1 GROSS AREA
- 2 NET RENTABLE AREA
- 3 NET USABLE AREA

MARKET RENT - Enter the current market rent of the leased space, if different from the actual rent.

251 ROW / HALL / BOTH I&E S2 Optional

Enter the code that best describes the type of apartment building.

- R ROW to indicate that the apartment building is constructed so that each apartment has an entrance directly to the outside.
- H HALL to indicate that the apartment building is constructed so the entrance to each apartment is from a hallway.
- B BOTH to indicate that the apartment building has a combination of both apartments with direct outside access and hallway entrances.

252 TOTAL NUMBER OF UNITS I&E S2 Optional

Enter the number of apartment units in the apartment building. Include all sizes and types of units in this count.

253 TOTAL NUMBER OF ROOMS I&E S2 Optional

Enter the overall total of all rooms; bedrooms, living rooms, kitchens, etc., in the apartment building. Do not include bathrooms or utility rooms in this count.

254 TOTAL NUMBER OF BEDROOMS I&E S2 Optional

Enter the total number of separate bedrooms in the entire apartment building. Studio apartments do not count as a bedroom.

255 AVERAGE SQFT / UNIT I&E S2 Optional

Enter the average square feet per apartment. To calculate this figure divide the gross area of the apartment building by the total number of units in the building.

256 MAJOR RENOVATION I&E S2 Optional

Enter the last two digits of the year in which the apartment building under went a major renovation. Do not consider routine maintenance or repairs; such as a new roof or exterior painting, as renovation. Renovation is performed to modernize the building to maintain its marketability.

261-266 APARTMENT UNIT BREAKDOWN I&E S2 Optional

This section is used to record the different configuration combinations of type, bedrooms, baths, and size. Each different configuration should be listed on a separate line.

TYPE - Enter the type of apartment unit.

- 1 GARDEN APARTMENT - Unit in a multistory apartment building that is located on a single floor.
- 2 TOWNHOUSE APARTMENT - Single or multistory unit with ground-level entrance that has no units above or below.
- 3 OTHER

UNITS - Enter the number of apartments with the listed configuration.

BEDROOMS - Enter the number of bedrooms in the configured apartment. A studio or efficiency apartment has no bedrooms.

BATHS - Enter the number of baths in the configured apartment. For example; one full bath = 10, one and half baths = 15, two full baths = 20.

SIZE - Enter the average square foot size of the unit in the listed configuration. For consistency, use the external dimensions of the apartment.

RENT - Enter the rent per month of the particular configuration. The rent recorded should be the average market rent of the units in that configuration, or if desired, can be entered for each distinct actual rent.

268 APARTMENT AMENITIES I&E S2 Optional

Enter a 1=yes or 0 (zero)-no to indicate whether the Apartment Amenity exists.

- 1 SWIMMING POOL
- 2 TENNIS COURT
- 3 CLUBHOUSE
- 4 EXERCISE ROOM
- 5 SAUNA
- 6 COVERED PARKING
- 7 BALCONY PATIO
- 8 AUXILIARY STORAGE
- 9 ELEVATOR

269 APARTMENT FEATURES I&E S2 Optional

Enter a 1=yes or 0 (zero)-no to indicate whether the Apartment Feature exists.

- 1 DISHWASHER
- 2 DISPOSAL
- 3 FIREPLACE
- 4 WASHER / DRYER HOOKUPS
- 5 APPLIANCES: STOVE and / or REFRIGERATOR
- 6 FURNISHED

271 PARKING I&E S2 Optional

COVERED - Enter the number and average per unit monthly rental charge for covered parking spaces. If included in monthly apartment rent, leave blank. Covered spaces may be in a parking ramp or a carport.

UNCOVERED - Enter the number and average per unit monthly rental charge for uncovered parking spaces. If included in monthly apartment rent, leave blank. Uncovered spaces may include those in a parking lot or on the top deck of a parking ramp.

PART 3: INCOME AND EXPENSE DATA

272 VACANCY I&E S2

Optional

Enter the average annual vacancy rate of the building.

EXPENSE ITEMIZATION I&E S2

This section is for input of the expenses as broken down by category. Generally, expenses would be expected to exhibit similarity within a particular structure and/or use type. Further, expenses can be compared across properties by considering them as a percentage of potential gross income.

273 INSURANCE EXPENSE I&E S2

Optional

Enter either Owner or Tenant (O or T) to indicate who pays for the insurance on the building and the amount paid for the insurance. The amount paid should be expressed as an annual premium.

274 PROPERTY TAX EXPENSE I&E S2

Optional

Enter either Owner or Tenant (O or T) to indicate who pays for the property taxes and the amount paid for property taxes. If the taxes paid are to be treated as the effective tax rate part of the capitalization rate, leave this field blank.

275 MAINTENANCE EXPENSE I&E S2

Optional

The information pertaining to the maintenance of the building can be entered as either an overall figure in this field or broken down between interior and exterior maintenance in the next two fields.

Enter either Owner or Tenant (O or T) to indicate who pays for the Overall Maintenance of the building and the amount paid.

276 INTERIOR MAINTENANCE EXPENSE

Optional

I&E S2

Enter either Owner or Tenant (O or T) to indicate who pays for the Interior Maintenance of the building and the amount paid for the maintenance. Interior maintenance can include the wages and salaries of personnel needed to maintain the interior of the building, janitorial services, security, supplies, and decorating.

277 EXTERIOR MAINTENANCE EXPENSE

Optional

I&E S2

Enter either Owner or Tenant (O or T) to indicate who pays for the Exterior Maintenance of the building and the amount paid for the maintenance. Exterior maintenance can include the wages and salaries of personnel needed to maintain the exterior of the building, trash removal, security, supplies, and decorating.

278 ELEVATOR EXPENSE

I&E S2

Optional

Enter either Owner or Tenant (O or T) to indicate who pays for the repairs and service of the elevators in the building and the amount paid for such service.

279 UTILITY EXPENSE

I&E S2

Optional

Enter either Owner or Tenant (O or T) to indicate who pays for the utilities of the building.

Enter the type of utilities paid for:

- 1 ALL to indicate that all utilities; gas, water, electricity, sewer, telephone, and trash removal are paid.
- 2 EXCEPT ELECTRICITY to indicate that all utilities except for electricity are paid.
- 3 OTHER to indicate that some other combination of utilities is being paid.

Enter the annual amount being paid for utilities.

280 RESERVE FOR REPLACEMENT

I&E S2

Optional

Enter either Owner or Tenant (O or T) to indicate who pays for the Reserve and the amount paid for the eventual replacement of short-lived items. These are items that must be replaced before the end of the economic life of the building, such as water heaters, roof, heating and/or air conditioning, and floor coverings.

36. INCOME AND EXPENSE DATA

281 MANAGEMENT EXPENSE I&E S2

Optional

Enter either Owner or Tenant (O or T) to indicate who pays for the management expense and the amount paid. Management expenses can include; accounting and legal expenses, manager's salary, office expenses, rent collections, and commissions. Also include in this category all salaries for employees not included in other categories such as maintenance.

282 GENERAL EXPENSE I&E S2

Optional

Enter either Owner or Tenant (O or T) to indicate who pays for the General Expenses and the amount paid. This category includes payroll taxes, group insurance, advertising, and other expenses not specifically accounted for in other categories.

283 MISCELLANEOUS EXPENSES I&E S2

Optional

Enter either Owner or Tenant (O or T) to indicate who pays for the Miscellaneous Expenses and the amount paid for them. Such items will be individually small amounts that do not justify a separate listing and are a small percentage of the effective gross income.

291-292 NOTES I&E S2

Optional

Notes should be short and to the point. Space is provided to enter two different NOTES for each record.

NOTE CODE - Enter the code that best describes the reason for this note. This code will permit computer extraction and sorting of the notes to aid in field work and review.

CODES will be developed at a later date.

EXPLANATION - Enter what additional descriptive information is necessary that will further clarify the reason for this note.

600 STRUCTURE TYPE I&E S1

Required

Please see Section 34 for instructions to code this field.

PART 3: INCOME AND EXPENSE DATA

A36. OPERATING STATEMENTS

The Operating Statements (I&E's) are designed to collect and analyze income and expense information on income producing properties. With this information, the appraiser is able to estimate value through capitalization of income. The Operating Statements are divided into four major categories: Market Data, Cost Data, Remodeling Data, and Income and Expense Data. The Income and Expense area of the statements is divided into five specialized areas: Apartments, Hotel/Motel, General Commercial (retail, warehousing, industry), Office Buildings, and Mobile Home Parks. The purpose of the specific income and expense areas is to allow the property owner/manager space to enter applicable income, expense, and amenity data.

MARKET DATA

Space is provided to enter any sales information for both vacant and improved parcels. In addition, space is provided to enter the value of any personal property, inventories, or licenses that may have been included in the purchase price. Also, space is provided to enter the percent of mortgage, mortgage term, and interest rate.

COST DATA

Space is provided to enter any construction cost information that is available concerning the subject property. When possible, sizes of additions, paving, etc., should be entered under the comments area.

REMODELING DATA

Space is provided to enter the cost and a description of significant remodeling that has been associated with the building, the year of the remodeling, and whether the cost was attributable to the owner or a tenant.

OPERATING STATEMENT**Apartments**

Space is provided to enter a detailed current quoted rent per month by unit type. In instances where rents are computed on a square foot basis, space is provided to note the total apartment complex rentable area.

Project amenities and unit built-ins should be noted as to what is included/available in the apartment complex. The owner expense statement includes areas to enter what is paid by the owner and the costs associated for a two year period. The occupancy percentage should be entered in the space provided. Space is also provided to enter the number of parking spaces available and the monthly rental charge, if applicable.

Hotel and Motel

This area of the operating statement is designed to enter the income, expense, and amenities associated with the hotel and motel operations. Space is provided to list the number and type of rooms available together with services and amenities per room. Income should be listed by rental type and amount per unit. Restaurant and lounge incomes should also be listed. Actual expense amounts should be obtained if possible and entered in the appropriate spaces.

General Retail, Warehousing, Industrial, Other

This area is designed to enter income and expense amounts on general retail (retail sales), small industrial, and warehouse type facilities. Space is provided to enter the tenants, floor level, lease term, and floor area of the lease. Expenses are broken down into the general areas of insurance, taxes, maintenance, and utilities. Actual expense should be entered when available.

Office Building

This area of the operating statement is to enter the applicable income and expense information for office buildings. Space is provided to enter the building total gross area, net rentable area, and lease terms, i.e., on a total gross or net rentable area. The amount of retail area should be entered together with the current occupancy rate. The income statement is designed to quote rent per square foot, based on floor level and whether escalation of rental clause is included. The expense area is broken down into three major categories: insurance and taxes, building maintenance, and utilities. Actual expense should be entered by category if available.

PART 3: DATA COLLECTION

Mobile Home Parks

This area of the operating statement is to enter the applicable income and expense information for mobile home parks. Space is provided to enter the total sites available; the operating period; the rent schedule on a monthly basis by number of sites; and operating statement information including gross revenue and expenses.

Sample Forms

The following are illustrations of forms to be used to collect income and expense information on Apartments, Hotels and Motels, General Retail, Warehousing, Industrial, Office Buildings, and Mobile Home Parks.

APARTMENTS and HOTELS & MOTELS OPERATING STATEMENT

PLEASE RETURN COMPLETED FORM TO:

PROPERTY ADDRESS _____

Dear Property Owner:

A revaluation of all property is now being conducted in your community to establish current and equitable values for assessment purposes.

As an owner or manager of income producing property you are aware of the impact that economic factors have on property valuation. In order that we may estimate a fair and equitable value, we request that you complete this form with the appropriate economic information and return it as soon as possible. You may be assured the information you supply will be treated in a confidential manner. It will be used by the appraiser to assist him in arriving at an opinion of value on your property by the income approach.

Please complete the part of this form applicable to your property.

If additional space is required, or if you wish to submit any supplemental information, please attach it to this form.

Very truly yours,

MARKET & COST DATA

MARKET DATA	PURCHASED LAND ONLY FOR	PURCHASED LAND & BUILDINGS FOR	LAND SIZE
	\$ _____ IN 19 ____	\$ _____ IN 19 ____	
	PLEASE INDICATE THE AMOUNT IF ANY OF THE PURCHASE PRICE PAID FOR CONSIDERATIONS OTHER THAN REAL ESTATE		
	ITEMS _____	AMOUNT \$ _____	

PERCENT OF MORTGAGE _____

MORTGAGE TERM _____

MORTGAGE INTEREST RATE _____

COST DATA	1 All cost should include labor, materials, architectural fees, and builders overhead and profit 2 Building costs should include the structure, and all mechanical features such as electric, plumbing, heating, air conditioning, sprinkler and elevators 3 Site improvements refer to features such as site preparation, utility services, and landscaping 4 If cost includes items not considered real estate, please indicate under comments the items and the costs				
	COST	YEAR	COST	YEAR	COMMENTS
SITE IMPROVEMENTS					
BUILDINGS					
ADDITIONS TO ORIGINAL BLDG					
PAVING					
OTHER YARD ITEMS					
TOTAL					

REMODELING DATA	PLEASE INDICATE THE SCOPE AND COST OF SIGNIFICANT REMODELING			
	YEAR	DESCRIPTION	COST	COST PAID BY OWNER TENANT

OTHER DATA

Please state any additional information you feel is pertinent to ensure a fair and equitable appraisal of your property.	

SUBMITTED BY _____ TELEPHONE _____ DATE: _____

OPERATING STATEMENT - APARTMENTS

INCOME STATEMENT						
UNIT TYPE	# OF UNITS	CURR QUOTED RENT/MONTH	PROJECT AMENITIES	LANDLORD EXPENSE STATEMENT		
				✓ - WHERE APPROPRIATE	ACTUAL 19	ACTUAL 19
EFFICIENCY (A)			() SWIMMING POOL	() INSURANCE		
	(B)		() TENNIS COURTS	() REAL ESTATE TAXES		
1 BEDROOM (A)			() CLUB HOUSE	() GROUND LEASE		
	(B)		() EXERCISE ROOM			
	(C)		() SAUNA	MAINTENANCE		
2 BEDROOM (A)			() COVERED PARKING	() ALL		
	(B)		() BALCONIES/PATIOS	() EXT. & STRUCT. ONLY		
	(C)		() AUXILIARY STORAGE	() JANITORIAL		
			APARTMENTS INCLUDE	UTILITIES		
3 BEDROOM (A)			() RANGE	() ALL		
	(B)		() REFRIGERATOR	() ALL EXCEPT ELECTRIC		
	(C)		() DISHWASHER	() TRASH REMOVAL		
	(D)		() DISPOSAL	() PAYROLL		
4 BEDROOM (A)			() CARPET	() SECURITY		
	(B)		() DRAPES	() RESERVES FOR		
	(C)		() FIREPLACE	REPLACEMENT		
			() WASHER / DRYER	() MANAGEMENT		
			() CONNECTIONS ONLY (W/D)	() MISCELLANEOUS		
ACTUAL 1986 RENTAL INCOME _____			1986 OTHER INCOME (LAUNDRY, CLUBHOUSE RENTAL, ETC.) _____			
ACTUAL 1987 RENTAL INCOME _____			1987 OTHER INCOME (LAUNDRY, CLUBHOUSE RENTAL, ETC.) _____			
PARKING	# COVERED _____	MONTHLY CHARGE FOR PARKING	COVERED _____	CURRENT		
	# UNCOVERED _____		UNCOVERED _____	OCCUPANCY _____ %		

OPERATING STATEMENT - HOTELS & MOTELS

ROOM COUNT		SERVICES	AMENITIES	TOTAL GROSS INCOME	
# W/SINGLE BEDS	_____	() COFFEE SHOP	() COLOR TV	19 __	\$ _____
# W/DOUBLE/KING BEDS	_____	() RESTAURANT	() EXERCISE FACILITIES	19 __	\$ _____
# W/2 DOUBLES	_____	() BAR	() TENNIS	TOTAL OPERATION EXPENSES	
SUITES	_____	() NIGHT CLUB	() SAUNA	19 __	\$ _____
TOTAL KEY ROOMS	_____	() SHOPS	() POOL	19 __	\$ _____
		() GAME ROOM	() OTHER		

INCOME STATEMENT			EXPENSE STATEMENT		
_____ SINGLES @ _____	RESTAURANT _____	MANAGEMENT _____	DECORATING _____		
_____ DOUBLES @ _____	BAR/LOUNGE _____	MARKETING _____	REPAIRS/MAINT. _____		
_____ SUITES @ _____	PARKING _____	WAGES _____	INSURANCE _____		
_____ EXTRA PERSON @ _____	RECREATIONAL _____	HOUSEKEEPING _____	R. E. TAXES 19 __		
_____ OTHERS @ _____	OTHER INCOME _____	SUPPLIES _____	P. P. TAXES 19 __		
YEAR FACILITY BUILT _____		CONTRACT SERVICES _____	OTHER TAXES _____		
AVG. # ROOMS SOLD / YR. 19 __		UTILITIES _____	MISCELLANEOUS _____		
AVG. RATE / OCCUPIED ROOM 19 __					

ADDITIONAL COMMENTS	APPRAISERS USE
	STABILIZED INCOME 19 __ _____
	STABILIZED EXPENSES 19 __ _____
	NET INCOME BEFORE RECAPTURE _____
	INDICATED VALUE, INCOME APPROACH _____

GENERAL RETAIL, WAREHOUSING, INDUSTRIAL, OTHER, OFFICE BUILDINGS OPERATING STATEMENT

PLEASE RETURN COMPLETED FORM TO:

PROPERTY ADDRESS _____

Dear Property Owner:

A revaluation of all property is now being conducted in your community to establish current and equitable values for assessment purposes.

As an owner or manager of income producing property you are aware of the impact that economic factors have on property valuation. In order that we may estimate a fair and equitable value, we request that you complete this form with the appropriate economic information and return it as soon as possible. You may be assured the information you supply will be treated in a confidential manner. It will be used by the appraiser to assist him in arriving at an opinion of value on your property by the income approach.

Please complete the part of this form applicable to your property.

If additional space is required, or if you wish to submit any supplemental information, please attach it to this form.

Very truly yours,

MARKET & COST DATA

MARKET DATA	PURCHASED LAND ONLY FOR	PURCHASED LAND & BUILDINGS FOR	LAND SIZE
	\$ _____ IN 19 _____	\$ _____ IN 19 _____	_____
	PLEASE INDICATE THE AMOUNT IF ANY OF THE PURCHASE PRICE PAID FOR CONSIDERATIONS OTHER THAN REAL ESTATE		
	ITEMS _____	AMOUNT \$ _____	

PERCENT OF MORTGAGE _____

MORTGAGE TERM _____

MORTGAGE INTEREST RATE _____

COST DATA	1 All cost should include labor, materials, architectural fees, and builders overhead and profit 2 Building costs should include the structure, and all mechanical features such as electric, plumbing, heating, air conditioning, sprinkler and elevators 3 Site improvements refer to features such as site preparation, utility services, and landscaping 4 If cost includes items not considered real estate, please indicate under comments the items and the costs				
	COST	YEAR	COST	YEAR	COMMENTS
SITE IMPROVEMENTS					
BUILDINGS					
ADDITIONS TO ORIGINAL BLDG					
PAVING					
OTHER YARD ITEMS					
TOTAL					

REMODELING DATA	PLEASE INDICATE THE SCOPE AND COST OF SIGNIFICANT REMODELING			
	YEAR	DESCRIPTION	COST	COST PAID BY OWNER TENANT

OTHER DATA

Please state any additional information you feel is pertinent to ensure a fair and equitable appraisal of your property.

SUBMITTED BY _____ TELEPHONE _____ DATE: _____

PART 3: DATA COLLECTION

**OPERATING STATEMENT
GENERAL RETAIL, WAREHOUSING, INDUSTRIAL, OTHER**

TOTAL GROSS BUILDING AREA _____		MULTI TENANT _____		CURRENT OCCUPANCY 19 _____			
NO. OF FLOORS _____		SINGLE TENANT _____		_____ %			
FLOOR LEVELS	TYPE USE OR OCCUPANCY	TENANT NAME (VAC. IF VACANT)	LEASE SIGNED DATE 19 ____ TERM ____		MONTHLY RENT	SPACE LEASED S.F.	OWNER EST. MARKET RENT
___ TO ___							

LANDLORD EXPENSE STATEMENT

√ - WHERE APPROPRIATE	ACTUAL 19	ACTUAL 19	UTILITIES	ACTUAL 19	ACTUAL 19
() INSURANCE			() ALL		
() REAL ESTATE TAXES			() ALL EXCEPT ELECTRIC		
() GROUND LEASE			() OTHER		
MAINTENANCE			() TRASH REMOVAL		
() ALL			() PAYROLL		
() EXT. & STRUCT. ONLY			() SECURITY		
() OTHER			() RESERVES FOR REPLACEMENT		
() JANITORIAL			() MANAGEMENT		
			() MISCELLANEOUS		

OPERATING STATEMENT - OFFICE BUILDINGS

TOTAL GROSS BUILDING AREA _____		TOTAL RETAIL AREA _____		CURRENT OCCUPANCY OFFICE _____ RETAIL _____		
NET RENTABLE AREA _____		LEASED ON GROSS AREA BASIS _____		_____ % _____ %		
INCOME STATEMENT				LANDLORD EXPENSE STATEMENT		
FLOOR LEVELS	SQ. FOOT OFFICE 19	RENTS RETAIL 19	ESCALATION CLAUSES YES NO	√ - WHERE APPROPRIATE	ACTUAL 19	ACTUAL 19
___ TO ___				() INSURANCE		
___				() REAL ESTATE TAXES		
___				() GROUND LEASE		
___				MAINTENANCE		
___				() ALL		
___				() EXT. & STRUCT. ONLY		
___				() JANITORIAL		
OTHER INCOME/EXPENSES PLEASE EXPLAIN:				UTILITIES		
				() ALL		
				() ALL EXCEPT ELECTRIC		
				() OTHER		
				() TRASH REMOVAL		
				() PAYROLL		
			() SECURITY			

MOBILE HOME PARKS OPERATING STATEMENT

PLEASE RETURN COMPLETED FORM TO:

PROPERTY ADDRESS _____

Dear Property Owner:

A revaluation of all property is now being conducted in your community to establish current and equitable values for assessment purposes.

As an owner or manager of income producing property you are aware of the impact that economic factors have on property valuation. In order that we may estimate a fair and equitable value, we request that you complete this form with the appropriate economic information and return it as soon as possible. You may be assured the information you supply will be treated in a confidential manner. It will be used by the appraiser to assist him in arriving at an opinion of value on your property by the income approach.

Please complete the part of this form applicable to your property.

If additional space is required, or if you wish to submit any supplemental information, please attach it to this form.

Very truly yours,

MARKET & COST DATA

MARKET DATA	PURCHASED LAND ONLY FOR	PURCHASED LAND & BUILDINGS FOR	LAND SIZE
	\$ _____ IN 19 ____	\$ _____ IN 19 ____	
	PLEASE INDICATE THE AMOUNT IF ANY, OF THE PURCHASE PRICE PAID FOR CONSIDERATIONS OTHER THAN REAL ESTATE		
	ITEMS _____	AMOUNT \$ _____	

PERCENT OF MORTGAGE _____

MORTGAGE TERM _____

MORTGAGE INTEREST RATE _____

COST DATA	1 All cost should include labor, materials, architectural fees, and builders overhead and profit 2 Building costs should include the structure, and all mechanical features such as electric, plumbing, heating, air conditioning, sprinkler and elevators 3 Site improvements refer to features such as site preparation, utility services, and landscaping 4 If cost includes items not considered real estate, please indicate under comments the items and the costs				
	COST	YEAR	COST	YEAR	COMMENTS
SITE IMPROVEMENTS					
BUILDINGS					
ADDITIONS TO ORIGINAL BLDG					
PAVING					
OTHER YARD ITEMS					
TOTAL					

REMODELING DATA	PLEASE INDICATE THE SCOPE AND COST OF SIGNIFICANT REMODELING			
	YEAR	DESCRIPTION	COST	COST PAID BY OWNER TENANT

OTHER DATA

Please state any additional information you feel is pertinent to ensure a fair and equitable appraisal of your property.	

SUBMITTED BY _____

TELEPHONE _____

DATE: _____

PART 3: DATA COLLECTION

OPERATING STATEMENT - MOBILE HOME PARKS

OPERATING PERIOD: YEAR ROUND _____ SEASONAL _____

TOTAL SITES AVAILABLE FOR RENT: MOBILE HOME _____ TRAVEL TRAILER _____

RENT SCHEDULE - MONTHLY BASIS

_____ SITES @ \$ _____	_____ SITES @ \$ _____	_____ SITES @ \$ _____
_____ SITES @ \$ _____	_____ SITES @ \$ _____	_____ SITES @ \$ _____
_____ SITES @ \$ _____	_____ SITES @ \$ _____	_____ SITES @ \$ _____

ANNUAL GROSS POTENTIAL RENTAL INCOME IF 100%
OCCUPIED DURING OPERATING PERIOD, IF POSSIBLE.

\$ _____

OPERATING STATEMENT FOR 19____

INCOME: RENTAL REVENUE \$ _____

OTHER (LAUNDRY, VENDING, ETC.) _____

TOTAL INCOME \$ _____

EXPENSES: MANAGEMENT AND PAYROLL \$ _____

REPAIR AND MAINTENANCE COSTS _____

SERVICES _____

UTILITIES _____

REAL ESTATE TAXES _____

OTHER TAXES, FEES, ETC _____

INSURANCE _____

RESERVE FOR REPLACEMENTS _____

MISC ADMIN (LEGAL, AUDIT, ETC.) _____

*OTHER (EXPLAIN) _____

TOTAL EXPENSES \$ _____

*DO NOT INCLUDE DEBT SERVICE, INTEREST OR DEPRECIATION AS EXPENSES

SIGNATURE OWNER, MGT. OR AGT

DATE

TELEPHONE

41. ESTIMATING REPLACEMENT COST NEW

TABLE OF CONTENTS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE
41.1.	REPLACEMENT COST	1	41.1.4..	APPLYING THE PROPER GRADE FACTOR	2
41.1.1.	REPLACEMENT COST DEFINITION	1	41.1.5.	APPLYING THE PROPER COST AND DESIGN FACTOR	3
41.1.2.	PRICING SCHEDULES	1	41.2.	PRICING SCHEDULES AND COST TABLES	3
41.1.3.	SELECTING THE PROPER QUALITY GRADE	1			

41.1. REPLACEMENT COST

The informed buyer is not justified in paying anything more for a property than what it would cost him to acquire an equally desirable substitute property. Likewise, the upper limit of value of most improvements is the cost of reproducing an equally desirable substitute improvement. It follows, then, that a uniform starting point for an Equalization Program is to determine the Replacement Cost New of each and every improvement.

41.1.1. REPLACEMENT COST DEFINITION

Replacement Cost is the current cost of producing an improvement of equal utility to the subject property; it may or may not be the cost of reproducing a replica property. The distinction being drawn is one between Replacement Cost, which refers to a substitute property of equal utility, as opposed to *Reproduction Cost*, which refers to a substitute replica property.

The Replacement Cost of an improvement includes the total cost of construction incurred by the builder, whether preliminary to, during the course of, or after completion of its construction. Among these are materials, labor, all sub-contracts, builder's overhead and profit, architectural and engineering fees, consultation fees, survey and permit fees, legal fees, taxes, insurance and the cost of interim financing.

41.1.2. PRICING SCHEDULES

Pricing schedules and related cost tables are included in this manual to assist the appraiser in arriving at accurate estimation of Replacement

Cost New. They have been developed by applying unit-in-place costs to the construction of specified hypothetical or model buildings. Application of the schedules involves the selection of the model which most nearly resembles the subject building and adjusting its price to compensate for all significant variations.

Pricing schedules are included for various types of Residential, Agricultural, Institutional, Commercial and Industrial structures.

Cost adjustments for the variations which are most frequently encountered in a particular type building are included. Adjustments for other variations may be made by using either the Other Feature Cost Tables or other appropriate schedules.

41.1.3. SELECTING THE PROPER QUALITY GRADE

The quality of materials and workmanship is the one most significant variable to be considered in estimating the replacement cost of a structure. Two buildings may be built from the same general plan, each offering exactly the same facilities and with the same specific features, but with widely different costs due entirely to the quality of materials and workmanship used in their construction. For instance, the cost of a dwelling constructed of high quality materials and with the best of workmanship throughout can be more than twice that of one built from the same floor plan, but with inferior materials and workmanship.

PART 4: REPLACEMENT COST

The schedules included in this manual have been developed to provide the appraiser with a range of grades comprehensive enough to distinguish all significant variations in the quality of materials and workmanship which may be encountered; the basic specifications for each grade as to the type of facility furnished remain relatively consistent throughout, and the primary criterion for establishing the grade being the overall quality of materials and workmanship.

Two grading systems are in use in this manual. One is used for residential and agricultural buildings and the other is used for commercial and industrial buildings.

The majority of buildings erected as either residential or commercial/industrial fall within a definite class of construction, involving the use of average quality of materials with average quality of workmanship. This type of construction being the most common, it can readily be distinguished by the layman as well as the professional appraiser. Consequently, better or inferior quality of construction can be comparatively observed. The quality grading system and pricing schedule in this manual are keyed to this obvious condition; the basic grade being representative of that cost of construction using average quality of materials with average quality workmanship.

As an example, for residential dwellings, by assigning the factor 1.00 to Average Grade construction, the actual factor either above or below Average Grade can be illustrated as follows:

Cheap Grade	.30
Poor Grade	.49
Low Cost Grade	.68
Fair Grade	.85
Average Grade	1.00
Good Grade	1.29
Very Good Grade	1.48
Excellent Grade	1.67

In order to facilitate using this grading system, and again to promote and maintain uniformity in approach, the value relationship of grade to grade has been incorporated into the development of the base specifications relating to each schedule used in the manual.

The appraiser must exercise extreme caution not to confuse the concepts "quality" and "condition" when selecting the proper grade. This is especially

applicable to older buildings, wherein a deteriorated condition can have a noticeable effect on their physical appearance. A building will always retain its initial grade of construction, regardless of its existing deteriorated condition. The Quality Grade ultimately selected must reflect that original built-in quality, and the selection of that grade cannot be influenced in any way by the physical condition of the building.

41.1.4. APPLYING THE PROPER GRADE FACTOR

Grading would be a relatively simple process if all buildings were built to conform to the quality grade specifications outlined above. The fact is, however, that this ideal condition does not exist. It is not unusual for any conventional building to be built incorporating construction qualities that fall between the established grade levels. The grading system in this manual has been designed in such a way as to provide the appraiser with a method for accounting for such variations by establishing intermediate grades.

If the subject building is judged to be of a better or inferior quality than the actual grade levels, a grade factor of plus (+) or minus (-) should be applied, i.e., Average + would be better than a straight Average Grade, Good - poorer than a straight Good Grade, etc.

There is very rarely any clear cut designation of a specific grade factor. The appraiser will generally select a range, such as Average + to Good -, and then weigh the various quality factors exhibited in the construction in order to select the proper factor.

The quality factor ultimately selected should represent a composite judgment of the overall Quality Grade. Generally, the quality of materials and workmanship is fairly consistent throughout the construction of a specific building; however, since this is not always the case, it is frequently necessary to weigh the quality of each major component in order to arrive at the proper "overall" Quality Grade. Equal consideration must also be given to any "Additions" which are constructed of materials and workmanship *inconsistent* with the quality of the main building.

41.1.5. APPLYING THE PROPER COST AND DESIGN FACTOR

Architectural fees, material quantities, labor efficiency, and other factors influencing total construction costs may vary considerably from one building to another, depending upon its particular design. Two dwellings, for instance, showing no marked difference in size and quality may still show a measurable difference in cost, attributable primarily to a difference in design.

In computing the replacement cost of any building, therefore, it is necessary to adjust the cost to account for any features varying significantly from the base specifications from which the pricing schedules were developed.

The pricing schedules included in this manual, unless otherwise specified, have been developed to reflect perimeter-to-area wall ratios of rectangularly shaped buildings, uniform eave lines and roof

slopes, overhangs, ceiling heights, and other architectural features most typical of conventional designs.

The adjustment for variations in design must be made by applying a Cost and Design Factor denoting a percentage adjustment of the sub-total replacement cost, i.e., apply a +5% to indicate a 5% increase in the replacement cost, apply a +10% to indicate a 10% increase, etc.

The Cost and Design Factors applicable to dwellings will normally range from 0 to 15%. However, the Cost and Design Factors applicable to special architectural designs may range considerably higher. The selection of the proper Cost and Design Factor is a product of the experience and sound judgment of the appraiser, who must have the ability to analyze various construction components and determine the influence of each upon the overall cost.

41.2. PRICING SCHEDULES AND COST TABLES

The Pricing Schedules and Cost Tables in this manual are provided to assist the appraiser in arriving at accurate and uniform valuations. Used properly, they should prove to be an invaluable tool. Quality valuations, however, are not the product of schedules and tables themselves, but rather of the appraiser's ability to use them effectively. In order to bring this about, a thorough understanding of the make-up and the capabilities and limitations of each schedule is essential. The appraiser must know the specifications from which the base prices were derived, the composition of the prices, and the proper techniques and procedures for applying the prices. What's more important, the appraiser must be able to exercise good common sense and sound judgment in selecting and using them.

It should also be noted that the schedules and tables in the manual have been developed primarily for mass appraisal and tax equalization purposes. They have, therefore, been designed to provide the appraiser with an uncomplicated, fast, and effective method of arriving at an accurate estimate of replacement costs. In order to maintain simplicity in the schedules, techniques, and procedures, it is often necessary to make certain compromises from a strictly technical and engineering point of view. Extensive effort has been made in developing the schedules to minimize these compromises and limit them to variables which have minimal influence on the final value of the building. The schedules have been designed to reflect actual building costs and practices. Field tests have proven them to be both accurate and reliable, and when applied properly, highly effective in arriving at realistic replacement costs.

42. DWELLINGS

TABLE OF CONTENTS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE
42.1.	QUALITY GRADE SPECIFICATIONS	1	42.3.2.	MANUAL PRICING PROCEDURE	18
42.1.1.	INTRODUCTION	1	42.4.	PRICING TABLES	20
42.1.2.	QUALITY GRADES AND FACTORS	2	42.4.1.	DWELLING BASE PRICING SCHEDULE	20
42.2.	QUALITY GRADE SPECIFICATIONS AND PHOTOGRAPHS	2	42.4.2.	BASE PRICE ADJUSTMENTS	22
42.2.1.	GRADE 1 - CHEAP QUALITY RESIDENCES	2	42.4.2.1.	HEATING AND AIR CONDITIONING ADJUSTMENTS	22
42.2.2.	GRADE 2 - POOR QUALITY RESIDENCES	5	42.4.2.2.	PLUMBING ADJUSTMENTS	22
42.2.3.	GRADE 3 - LOW COST QUALITY RESIDENCES	6	42.4.3.	ADDITIONS	23
42.2.4.	GRADE 4 - FAIR QUALITY RESIDENCES	9	42.4.3.1.	PORCHES	23
42.2.5.	GRADE 5 - AVERAGE QUALITY RESIDENCES	10	42.4.3.2.	ATTACHED UTILITY STRUCTURE	23
42.2.6.	GRADE 6 - GOOD QUALITY RESIDENCES	13	42.4.3.3.	ATTACHED GARAGES	24
42.2.7.	GRADE 7 - VERY GOOD QUALITY RESIDENCES	14	42.4.3.4.	CARPORT / CANOPY; ATTACHED GREENHOUSE; DECKS; STOOPS	25
42.2.8.	GRADE 8 - EXCELLENT QUALITY RESIDENCES	17	42.5.	OTHER FEATURES	25
42.3.	MANUAL PRICING INSTRUCTIONS	18	42.5.1.	BASEMENT GARAGES	25
42.3.1.	GENERAL APPLICATION	18	42.5.2.	MASONRY FIREPLACES	25
			42.5.3.	PREFABRICATED METAL FIREPLACES / STOVES	26
			42.5.4.	MISCELLANEOUS OTHER FEATURES	26
			42.5.5.	FINISHED BASEMENT AREA	26

42.1. QUALITY GRADE SPECIFICATIONS

42.1.1. INTRODUCTION

The base cost of a residence is determined by the quality of construction. Determining the quality of both materials and workmanship is fundamental when assigning an overall quality grade. Quality of materials and workmanship in individual building components will vary, but will tend to influence each other and an overall quality grade will tend to be consistent throughout the residence.

It is the appraiser's responsibility to weigh the quality of all the building components and assign a quality grade that best represents the total residence.

Consideration should not only be given to quality of materials and workmanship used, but to complexity of design and layout. Lower quality residences are usually simple in design and reflect lower cost, and would be typical of tract

development. Higher quality residences are usually more complex in design, with more attention given to layout and detail, and are usually individually designed. Higher quality houses are generally larger in size than lower quality residences.

The general descriptions given for each grade are guidelines that emphasize the most prominent characteristics of residences within that grade. They are not meant to be exact specifications. Residences that do not typically represent the basic grade, can more accurately be valued by using a plus or minus grade variation.

Photographs of each grade of residence are also to be used as guidelines. An accurate quality grade cannot always be assigned based on exterior appearance. Interior layout and finish can greatly influence cost and must be considered when assigning a quality grade.

PART 4: REPLACEMENT COST

42.1.2. QUALITY GRADES AND FACTORS

The residential system uses a numerical grading scale with 5 as the average quality of construction, with a range of grades from a low of 1 (cheap construction) to a high of 8 (excellent construction). A plus (+) and minus (-) adjustment is allowed within each category. The relative value ranges are indicated by the following table.

<u>Grade</u>	<u>Value Range</u>
1 - Cheap	- .24
	.30
	+ .36
2 - Poor	- .43
	.49
	+ .55
3 - Low Cost	- .62
	.68
	+ .74

<u>Grade</u>	<u>Value Range</u>
4 - Fair	- .79
	.85
	+ .90
5 - Average	- .95
	1.00
	+ 1.10
6 - Good	- 1.19
	1.29
	+ 1.35
7 - Very Good	- 1.42
	1.48
	+ 1.54
8 - Excellent	- 1.61
	1.67
	+ 2.00

42.2. QUALITY GRADE SPECIFICATIONS AND PHOTOGRAPHS

42.2.1. GRADE 1 - CHEAP QUALITY RESIDENCES

Residences are of very low cost construction built with low quality materials and substandard workmanship. These residential structures will not meet minimum building code requirements. Exterior and interior finishes are very plain. These structures are built for minimal habitation and are distinguished by the absence of a perimeter foundation, plumbing and heating system.

FOUNDATION - Wood sills on masonry or stone piers (no perimeter foundation).

EXTERIOR - Wood frame, minimal siding.

ROOF - Low pitch; wood frame, cheap sheathing, roll roofing or metal; minimal or no eaves.

FLOORS - Wood structure, single, softwood floor over minimal joists (no sub-floor).

INTERIOR - Frame; wallboard walls and ceiling.

HEATING - None.

PLUMBING - None.

ELECTRICAL - Few fixtures or outlets.

INSULATION - None.

BASEMENT - None.

GARAGE

Foundation - Stone or wood sills (no perimeter concrete).

Exterior - Wood frame; light studs; minimal siding.

Roof - Low pitch; wood frame; roll roofing, no eaves.

Floor - Dirt floor.

Interior - Unfinished - hinged door; no windows.

Heating - None.

Electrical - None.

ENCLOSED PORCH - Raised floor; interior finish; ceiling; roof like residence.

OPEN PORCH - Raised floor; unceiled, roof.

CARPORT / PATIO - Slab on ground; unceiled; shed roof.

GRADE 1 - CHEAP QUALITY RESIDENCES



PART 4: REPLACEMENT COST

GRADE 2 - POOR QUALITY RESIDENCES



42.2.2. GRADE 2 - POOR QUALITY RESIDENCES

Residences are of substandard construction, built with low cost materials and below average workmanship. These residential structures will not meet most minimum building code requirements. Exterior and interior finishes are plain with little or no trim. These houses are built for function, with little attention to design.

FOUNDATION - Concrete or concrete block perimeter foundation and interior piers.

EXTERIOR - Wood frame; light studs or box frame; low cost plywood or hardboard siding, stucco, masonry veneer; common brick or concrete block masonry.

ROOF - Low pitch; wood frame, 1" spaced sheathing, lightweight roll roofing or composition shingles, or metal; minimal eaves.

FLOORS - Wood structure; single, softwood flooring over minimal joists (no sub-floor); low cost floor covering, carpet or linoleum.

INTERIOR - Frame; low cost wallboard or inexpensive drywall, painted; minimal low cost cabinets.

HEATING - Forced warm air systems with thermostat control.

PLUMBING - 4 cheap fixtures: lavatory, toilet, kitchen sink and water heater.

ELECTRICAL - Minimum quality fixtures, minimum number of outlets (wiring substandard by most codes).

INSULATION - Minimal.

BASEMENT

Foundation - Concrete or concrete block perimeter foundation and interior piers.

Exterior - Concrete or concrete block walls; water-proofed; minimal windows.

Floor - Concrete on the ground.

Interior - Unfinished; exposed columns and beams; softwood, open riser stairs.

Heating - None.

Electrical - Minimum wiring; minimum number of outlets.

BASEMENT FINISH

Rooms - Fully partitioned for recreation room, bedrooms, laundry room, bathroom, etc.

Floor - Cheap carpet or uncovered and painted.

Interior - Furring and framing; cheap gypsum board or composition paneling, few interior partitions.

Ceiling - Fiberboard.

Heating - None, if heat desired, the basement finish area must be included in total heated area.

Plumbing - None.

Electrical - Minimum lighting and outlets.

GARAGE

Foundation - Concrete; concrete block; stone or wood piers.

Exterior - Wood frame; light studs; cheap siding.

Roof - Low pitch; wood frame; cheap composition roof, minimal eaves.

Floors - Dirt floor.

Interior - Unfinished; no wallboard; cheap overhead or hinged door; possibly one window.

Heating - None.

Electrical - None.

BASEMENT GARAGE

Foundation - Concrete or concrete block; base cost included in basement specifications.

Exterior - Concrete or block walls; base cost included in basement specifications.

Floor - Concrete on ground; base cost included in basement specifications.

Interior - Finished - Fireproofed wall and ceiling.

Heating - None, included in base specifications.

Electrical - Minimum.

ENCLOSED PORCH - Raised floor; interior finish; ceiling; roof like residence.

OPEN PORCH - Raised floor; unceiled, roof.

CARPORT / PATIO - Slab on ground; unceiled; shed roof.

PART 4: REPLACEMENT COST

42.2.3. GRADE 3 - LOW COST QUALITY RESIDENCES

Grade 1F-3 residences are of low cost construction built with low cost materials and average workmanship but will meet most minimum building code requirements. Exterior and interior finishes are plain, minimum fenestration with inexpensive sash and little or no trim. These homes are built for function, not appearance.

FOUNDATION - Reinforced concrete perimeter foundation and interior piers.

EXTERIOR - Wood frame; sheathing; low cost plywood or hardboard siding, stucco, masonry veneer; common brick or concrete block masonry.

ROOF - Low to medium pitch (usually less than 4" in 12"); wood frame, sheathing, lightweight composition shingle or tar and gravel, or metal; minimal eaves.

FLOORS - Wood structure, light framing, softwood or plywood sub-floor; inexpensive carpet, vinyl composition tile or linoleum.

INTERIOR - Frame; drywall painted or low cost paneling; painted or vinyl veneer cabinets, low cost laminated plastic countertops; hollow core doors and low cost hardware; minimal closet space.

HEATING - Radiant, steam, forced warm air system or equal, with thermostat and automatic fired furnace or boiler.

PLUMBING - 5 low cost fixtures: lavatory, toilet, bathtub or shower or combination, kitchen sink and water heater.

ELECTRICAL - Low cost fixtures and a minimum number of outlets.

INSULATION - Minimal.

BASEMENT

Foundation - Concrete or concrete block perimeter foundation and interior piers.

Exterior - Concrete or concrete block walls; water-proofed; minimal windows.

Floor - Concrete on the ground.

Interior - Unfinished; exposed columns and beams; softwood, open riser stairs.

Heating - None.

Electrical - Minimum wiring; minimum number of outlets.

BASEMENT FINISH

Rooms - Fully partitioned for recreation room, bedroom(s), laundry room, bathroom(s), etc.

Floor - Low cost carpet or composition tile.

Interior - Furring and framing; drywall, taped and painted, or low cost paneling.

Ceiling - Fiberboard.

Heating - None, if heat desired, the basement finish area must be included in total heated area.

Plumbing - None.

Electrical - Minimum lighting and outlets.

GARAGE

Foundation - Concrete or block foundation.

Exterior - Wood frame; low cost brick or block; low cost stucco or siding.

Roof - Rafters; gable roof; low to medium pitch, light weight composition or asphalt shingles, minimal eaves.

Floors - Unreinforced concrete slab.

Interior - Unfinished: No wallboard; low cost overhead or hinged door; minimal window area. Finished: Wallboard; low cost overhead or hinged door; minimal window area.

Heating - None.

Electrical - Electrical - Minimal lighting.

BASEMENT GARAGE

Foundation - Reinforced concrete perimeter; base cost included in basement specifications.

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications.

Floor - Concrete on ground; base cost included in basement specifications.

Interior - Finished: Fire proofed wall and ceiling.

Heating - None.

Electrical - Minimum.

ENCLOSED PORCH - Raised floor; interior finish; ceiling; roof like residence.

OPEN PORCH - Raised floor; unceiled, roof.

CARPORT / PATIO - Slab on ground; unceiled; shed roof.

GRADE 3 - LOW COST QUALITY RESIDENCES



GRADE 4 - FAIR QUALITY RESIDENCES



42.2.4. GRADE 4 - FAIR QUALITY RESIDENCES

Residences are of fair quality construction built with average materials and workmanship. These houses will meet minimum building codes and construction requirements of lending institutions and mortgage insuring agencies. Exterior ornamentation is usually limited to the front elevation and with a minimum amount of inexpensive fenestration. Interior finishes are plain with few refinements. These homes are usually designed from stock plans for speculative residential developments.

FOUNDATION - Reinforced concrete perimeter foundation and interior piers.

EXTERIOR - Wood frame; wood sheathing; plywood or hardboard siding, stucco, masonry veneer; common brick or concrete block masonry.

ROOF - Low to medium pitch (usually 4" in 12" or less); wood frame, sheathing, lightweight composition shingles or tar and gravel, or metal; moderate eaves.

FLOORS - Wood structure, medium frame and sub-floor on first and upper floors, fair carpet, hardwood, asphalt or vinyl composition tile.

INTERIOR - Frame; plaster or drywall taped and painted (enameled walls and ceilings in kitchen and bath); fair stock cabinets typically painted or vinyl veneered; laminated plastic countertops, small splash; stock hollow core doors with inexpensive hardware; minimal closet space.

HEATING - Radiant, steam, forced warm air system or equal, with thermostat and automatic fired furnace or boiler.

PLUMBING - 5 standard fixtures: lavatory, toilet, bathtub or shower or combination, kitchen sink and water heater.

ELECTRICAL - Standard quality fixtures with a minimum number of outlets.

INSULATION - Minimal.

BASEMENT

Foundation - Reinforced concrete perimeter foundation and interior piers.

Exterior - Concrete or concrete block walls; water-proofed; adequate number and size of windows.

Floor - Concrete slab floor; floor drain.

Interior - Unfinished; exposed columns (wood or steel pipe) and beams; softwood, open riser stairs.

Heating - None.

Electrical - Adequate number of outlets.

BASEMENT FINISH

Rooms - Fully partitioned for recreation room, bedroom(s), laundry room, bathroom(s), etc.

Floor - Fair carpet or vinyl composition tile.

Interior - Furring and framing; drywall, taped and painted or paneling.

Ceiling - Fiberboard or fair ceiling tile.

Heating - None, if heat desired, the basement finish area must be included in total heated area.

Plumbing - None.

Electrical - Individual room lighting and adequate number of outlets.

GARAGE

Foundation - Concrete foundation.

Exterior - Frame; block or brick; average stucco or siding.

Roof - Wood frame, sheathing; low to medium pitch; composition shingles or tar and gravel, moderate eaves.

Floors - Reinforced slab.

Interior - Unfinished: Fair quality overhead and pedestrian doors and windows. Finished: Drywall, taped and painted or wallboard; fair quality overhead and pedestrian doors and windows.

Heating - None.

Electrical - Lighting and minimal outlets.

BASEMENT GARAGE

Foundation - Reinforced concrete perimeter; base cost included in basement.

Exterior - Concrete or block walls; water-proofed; base cost included in basement.

Floor - Concrete on ground; floor drain; base cost included in basement.

Interior - Finished - Fire proofed wall and ceiling.

Heating - None.

Electrical - Minimum.

ENCLOSED PORCH - Raised floor; interior finish; ceiling; roof like residence.

OPEN PORCH - Raised floor; unceiled, roof

CARPORT / PATIO - Slab on ground; unceiled; shed or gable roof.

PART 4: REPLACEMENT COST

42.2.5. GRADE 5 - AVERAGE QUALITY RESIDENCES

Residences are of average construction built with average quality materials and acceptable workmanship. These houses will meet or exceed minimum building codes and the construction requirements of lending institutions and mortgage insuring agencies. Exterior ornamentation is frequently limited to the front elevation but with an adequate amount of standard quality aluminum or wood sash fenestration. Interior finishes are simple with some inexpensive wallpaper or paneling, doors are medium grade, hollow core with stock hardware. These homes are frequently designed for mass production.

FOUNDATION - Reinforced concrete perimeter foundation and interior foundation or piers.

EXTERIOR - Wood frame; wood sheathing; average quality siding or shingle, stucco, masonry veneer; common brick or concrete block masonry.

ROOF - Medium pitch (5" to 12" or less); 2" x 6" rafters or manufactured trusses, good quality sheathing, wood or medium weight composition shingles or tar and gravel, or metal; average eaves.

FLOORS - Wood structure, medium frame and sub-floor on first and upper floors; average quality carpet, hardwood, vinyl composition tile or sheet vinyl.

INTERIOR - Frame; plaster or drywall taped and painted (enameled walls and ceilings in kitchen and bath), some average wallpaper or paneling; prefinished cabinets; laminated plastic or ceramic tile counter tops with average splash; medium grade hollow core doors with standard grade hardware; stock baseboards; adequate closet space.

HEATING - Forced air, steam, vapor, hot water, or radiant system with thermostat and automatic fired furnace or boiler. Exhaust fan in kitchen.

PLUMBING - 6 average quality fixtures: lavatory, toilet, bathtub or shower or combination, kitchen sink, water heater and laundry facilities.

ELECTRICAL - Average quality fixtures and an adequate number of outlets.

INSULATION - Adequate.

BASEMENT

Foundation - Reinforced concrete perimeter foundation and interior piers.

Exterior - Concrete or concrete block walls; water-proofed; adequate number and size of windows.

Floor - Concrete slab floor; floor drain.

Interior - Unfinished: exposed columns (wood or steel pipe) and beams; softwood, open riser stairs.

Heating - None.

Electrical - Adequate number of outlets.

BASEMENT FINISH

Rooms - Fully partitioned for recreation room, bedroom(s), laundry room, bathroom(s), etc. Some attention given to design.

Floor - Average carpet or vinyl composition tile.

Interior - Furring and framing; drywall, taped and painted, average wallpaper or paneling.

Ceiling - Drywall, taped and painted.

Heating - None, if heat desired, the basement finish area must be included in total heated area.

Plumbing - None.

Electrical - Individual room lighting and adequate number of outlets.

GARAGE

Foundation - Concrete foundation.

Exterior - Frame; common brick or average quality stucco or siding; sometimes brick trim.

Roof - Medium pitch roof 2" x 6" rafters or manufactured trusses, good sheathing; wood or composition shingles.

Floor - Reinforced slab.

Interior - Unfinished: average quality overhead and pedestrian doors and windows. Finished: Drywall taped and painted or wall board; overhead and pedestrian doors; windows.

Heating - None.

Electrical - Lighting and adequate outlets.

BASEMENT GARAGE

Foundation - Reinforced concrete perimeter; base cost included in basement.

Exterior - Concrete or block walls; water-proofed; base cost included in basement.

Floor - Concrete on ground; floor drain; base cost included in basement.

Interior - Finished: Fire proofed wall and ceiling.

Heating - None.

Electrical - Average lighting and outlets.

ENCLOSED PORCH - Raised floor; interior finish; ceiling; roof like residence.

OPEN PORCH - Raised floor; unceiled, roof.

CARPORT / PATIO - Slab on ground; unceiled; shed or gable roof.

GRADE 5 - AVERAGE QUALITY RESIDENCES



PART 4: REPLACEMENT COST

GRADE 6 - GOOD QUALITY RESIDENCES



42.2.6. GRADE 6 - GOOD QUALITY RESIDENCES

Residences are of good quality construction built with good quality materials and workmanship and will have some custom craftsmanship. These houses will exceed minimum building codes and construction requirements for lending institutions and mortgage insuring agencies. Exterior ornamentation reflect some attention to detail with ample and good quality fenestration throughout. Interiors are well finished usually with good quality wallpaper or wood paneling; doors are good quality hollow core with attractive hardware. These homes are frequently custom built but may be mass produced in above average residential developments.

FOUNDATION - Reinforced concrete perimeter foundation and foundation or piers under interior supports.

EXTERIOR - Wood frame; wood sheathing; good quality siding or stucco; masonry veneer; common brick or concrete block masonry.

ROOF - Medium pitch with hips and valleys; 2" x 6" rafters or trusses, good quality solid sheathing, good quality, heavy weight composition shingles or good quality cedar shakes, good eaves.

FLOORS - Wood structure medium frame and sub-floor on first and upper floors; good quality carpet, hardwood, sheet vinyl or vinyl tile.

INTERIOR - Frame; plaster or drywall taped and painted with enameled walls and ceilings in kitchen and bath, some good quality wallpaper or wood paneling; ample amount of natural wood veneer finished cabinets; laminated plastic, ceramic tile, or simulated marble countertops and splash; good quality hollow core doors with attractive hardware; hardwood baseboards; ample closet and storage space.

HEATING - Forced warm air, steam, vapor, hot water, or radiant or equal system with thermostat and automatic fired furnace or boiler. Exhaust fan in kitchen and bathroom.

PLUMBING - 9 good quality fixtures: lavatories, toilets, bathtubs or shower combinations, kitchen sink, water heater and laundry facilities.

ELECTRICAL - Good quality fixtures and an ample number of outlets.

INSULATION - Good.

BASEMENT

Foundation - Reinforced concrete perimeter foundation and piers.

Exterior - Concrete or concrete block walls; water-proofed; adequate number and size of windows, good fenestration.

Floor - Moisture proof concrete slab floor; adequate floor drains.

Interior - Unfinished; exposed columns (wood or steel pipe) and beams; softwood, open riser stairs.

Heating - None.

Electrical - An adequate number of outlets.

BASEMENT FINISH

Rooms - Fully partitioned for recreation room, bedroom(s), laundry room, bathroom(s), etc. Well designed and partitioned.

Floor - Good carpet or vinyl flooring.

Interior - Furring and framing; vapor barrier; drywall taped and painted, good wallpaper or paneling.

Ceiling - Drywall taped and painted.

Heating - None, if heat desired, the basement finish area must be included in total heated area.

Plumbing - None.

Electrical - Individual room lighting and adequate number of outlets.

GARAGE

Foundation - Concrete foundation.

Exterior - Frame; face brick; good siding or stucco; good fenestration; good eaves.

Roof - Medium pitch, wood rafters and sheathing; shakes, or good composition shingles.

Floor - Reinforced slab.

Interior - Unfinished: exposed frame; good quality doors and windows. Finished: Drywall taped and painted or good wall board; good doors and windows.

Heating - None.

Electrical - Good lighting and adequate number of outlets.

BASEMENT GARAGE

Foundation - Reinforced concrete perimeter; base cost included in basement.

Exterior - Concrete or block walls; water-proofed; base cost included in basement.

Floor - Concrete on ground, floor drain; base cost included in basement.

Interior - Finished: Fire proofed wall and ceiling.

Heating - None.

Electrical - Good lighting and adequate outlets.

ENCLOSED PORCH - Raised floor; interior finish; ceiling, roof like residence.

OPEN PORCH - Raised floor; unceiled, roof.

CARPORT / PATIO - Slab on ground; unceiled; gable roof.

PART 4: REPLACEMENT COST

42.2.7. GRADE 7 - VERY GOOD QUALITY RESIDENCES

Residences are of high quality construction, built with high quality materials, workmanship and custom craftsmanship. Exterior ornamentation show refinements with good quality fenestration throughout. Interiors are well finished with good quality wall coverings or wood paneling and hardware. These homes are usually individually designed.

FOUNDATION - Reinforced concrete perimeter foundation and interior support foundation.

EXTERIOR - Wood frame; wood sheathing; high quality siding or stucco; masonry veneer; face brick or stone masonry; custom ornamentation and trim.

ROOF - Medium to high pitch with hips and valleys; heavy rafters, good quality solid sheathing, or cathedral ceiling with laminated beams and T&G deck; heavy wood shakes, good eaves.

FLOORS - Wood structure, heavy frame and sub-floor on first and upper floors; very good quality carpet, hardwood, sheet vinyl or ceramic tile.

INTERIOR - Frame; expertly finished plaster or drywall taped and painted with enameled walls and ceilings in kitchen and bath; high quality wallpaper or vinyl wall covering, hardwood paneling; ample amount of natural wood veneer finished cabinets; ceramic tile or highest quality laminated plastic countertops and splash; hardwood or enameled doors with high quality hardware; hardwood moldings; spacious walk-in closets and large storage closets.

HEATING - Forced warm air, steam, vapor, hot water, or radiant or equal system with thermostat and automatic fired furnace or boiler. Exhaust fan in kitchen and bathroom.

PLUMBING - 12 high quality fixtures: lavatories, toilets, bathtubs or showers or combinations, kitchen sink, water heater and laundry facilities.

ELECTRICAL - High quality fixtures, with well positioned outlets and some special outlets.

INSULATION - More than adequate.

BASEMENT

Foundation - Reinforced concrete perimeter foundation and interior support foundation.

Exterior - Concrete; water-proofed; adequate number and size of windows, good fenestration.

Floor - Moisture proof concrete slab floor; adequate floor drains.

Interior - Unfinished: exposed columns and beams (wood or steel), stairwell.

Heating - None.

Electrical - Adequate number of fixtures and outlets.

BASEMENT FINISH

Rooms - Fully partitioned for recreation room, bedroom(s), laundry room, bathroom(s), etc. Well designed and partitioned.

Floor - High quality carpet, vinyl flooring, or tile.

Interior - Furring and framing; vapor barrier; drywall taped and painted; good quality wallpaper or vinyl wall covering or hardwood paneling.

Ceiling - Drywall taped, textured and painted.

Heating - None, if heat desired, the basement finish area must be included in total heated area.

Plumbing - None.

Electrical - Individual room lighting and adequate number of outlets.

GARAGE

Foundation - Concrete foundation.

Exterior - Frame or brick; very good stucco or siding; stone or brick trim.

Roof - Medium to high pitch, heavy roof structure; shakes, tile, or good shingles, good eaves.

Floor - Reinforced slab.

Interior - Unfinished: No wall covering, very good doors and windows, good fenestration.

Finished: Drywall taped and painted or good wall board; very good doors and windows, good fenestration.

Heating - None.

Electrical - Good lighting and an ample number of outlets.

BASEMENT GARAGE

Foundation - Reinforced concrete perimeter; base cost included in basement specifications.

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications.

Floor - Concrete on ground, floor drain; base cost included in basement specifications.

Interior - Finished: Fire proofed wall and ceiling.

Heating - None.

Electrical - Good lighting and an ample number of outlets.

ENCLOSED PORCH - Raised floor; interior finish; ceiling; roof like residence.

OPEN PORCH - Raised floor; unceiled, roof.

CARPORT / PATIO - Slab on ground; unceiled; gable roof.

GRADE 7 - VERY GOOD QUALITY RESIDENCES



GRADE 8 - EXCELLENT QUALITY RESIDENCES



42.2.8. GRADE 8 - EXCELLENT QUALITY RESIDENCES

Residences are of highest quality construction built with best quality materials and workmanship with custom craftsmanship throughout. Exterior ornamentation reflects considerable attention to detail with well designed high quality fenestration. Interiors are well finished with highest quality wall coverings or hardwood paneling. These homes are individually designed and are usually unique, however, the base specifications does not represent the highest costs in residential construction.

FOUNDATION - Reinforced concrete perimeter foundation and interior support foundation.

EXTERIOR - Wood frame; wood sheathing; highest quality siding; masonry veneer; select brick or cut stone masonry; all custom trim.

ROOF - Medium to steep pitch with hips and valleys; heavy rafters, good quality solid sheathing or cathedral ceilings with laminated beams and T&G deck, clay tile or slate, very good eaves.

FLOORS - Wood structure, heavy frame and sub-floor on first and upper floors; excellent quality carpet, hardwood, terrazzo, ceramic tile, sheet vinyl.

INTERIOR - Frame; expertly finished plaster or drywall taped and painted with enameled walls and ceilings in kitchen and bath; excellent quality wallpaper or vinyl wall covering, hardwood paneling, ceramic tile; ample amounts of hardwood cabinets and specialty cabinetry items; ceramic tile or highest quality laminated plastic countertops and splash; hardwood or enameled doors with best quality hardware and hardwood moldings, spacious walk-in closets and large storage closets.

HEATING - Forced warm air, steam, vapor, hot water, radiant or equal with thermostatic controls. Automatic fired furnace or boiler. Exhaust fans in kitchen and bathrooms.

PLUMBING - 15 excellent quality fixtures: lavatories, toilets, bathtubs or shower or combinations, kitchen sink, water heater and laundry facilities.

ELECTRICAL - Excellent quality fixtures, many well positioned outlets and special outlets.

INSULATION - More than adequate.

BASEMENT

Foundation - Reinforced concrete perimeter foundation and interior support foundation.

Exterior - Concrete; water-proofed; adequate number and size of windows, very good fenestration.

Floor - Moisture proof concrete slab floor; adequate floor drains.

Interior - Unfinished; exposed columns and beams (wood or steel), stairwell.

Heating - None.

Electrical - Adequate number of fixtures and outlets.

BASEMENT FINISH

Rooms - Fully partitioned for recreation room, bedroom(s), laundry room, bathroom(s), etc. Very well designed.

Floor - Excellent carpet, sheet vinyl or ceramic tile.

Interior - Furring and framing; expertly finished drywall, high quality wallpaper or vinyl wall covering or excellent paneling.

Ceiling - Drywall, expertly taped, textured and painted.

Heating - None, if heat desired, the basement finish area must be included in total heated area.

Plumbing - None.

Electrical - Individual room lighting and adequate number of outlets.

GARAGE

Foundation - Concrete foundation.

Exterior - Frame or brick; best stucco or siding; stone or brick trim.

Roof - Heavy rafters or steep roof; shakes, tile, slate, or excellent shingles, ornamental eaves.

Floor - Heavy slab.

Interior - Unfinished: No wall covering; excellent doors, windows, very good fenestration. Finished: Gypsum board, taped, painted; excellent doors and windows, very good fenestration.

Heating - None.

Electrical - Good lighting and an ample number of outlets.

BASEMENT GARAGE

Foundation - Reinforced concrete perimeter; base cost included in basement specifications.

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications.

Floor - Concrete on ground, adequate floor drains; base cost included in basement specifications.

Interior - Finished: Fire proofed wall and ceiling.

Heating - None.

Electrical - Good lighting and an ample number of outlets.

ENCLOSED PORCH - Raised floor; interior finish; ceiling; roof like residence.

OPEN PORCH - Raised floor; unceiled, roof.

CARPORT / PATIO - Slab on ground; unceiled; gable roof.

42.3. MANUAL PRICING INSTRUCTIONS

The Residential Cost Program is used for computing the replacement cost new of all single family dwellings, and certain multi-family dwellings. "Average" grade costs are provided for first story, second story and additional stories and half story areas of dwellings of frame and masonry exterior wall construction, along with tables of base price adjustments, additions and other features.

42.3.1. GENERAL APPLICATION

In brief, the steps in the application of the pricing schedule are to add the costs for the separate areas on various levels (basement, first, second, additional, and half) and then to add adjustments for specific other items which affect the value. Finally, overall multipliers are applied to account for grade factor, cost and design factor, depreciation, and local indexes.

42.3.2. MANUAL PRICING PROCEDURE

Please note that the pricing schedules are computer-generated utilizing mathematical formulas to generate costs. It is possible to note a slightly different replacement cost new when comparing the computer-generated costs to the dwelling pricing schedules appearing in this manual. This is caused by the rounding procedures of the computer and should not be considered an error in the printed schedules or the computer-generated value.

Step 1. - Base Price Determine the areas for each of the following levels: basement, first floor, second and additional floors, half story, and attic.

Bay windows, overhangs and living area additions should be included in the calculated area of the appropriate floor level.

a. Computer pricing will be calculated to the nearest square foot. However, for ease of manual calculations, round each area to the nearest 10 square feet. In rounding, round 1 to 4 square feet down; and 5 to 9 square feet up.

b. From the table for the appropriate floor level, select the area closest to, but not greater than the area for that level. Because the tables show values at 100 square foot intervals, it will be necessary to interpolate for sizes falling between these intervals. To help in this interpolation, the

pricing schedules also give the dollar increment between the priced intervals. The price for a specific area for a given floor level is the price for that area plus the incremental value times the fraction of the area above the table level.

For example, the price of a 1564 square foot first story frame area is the sum of the price given for 1500 square feet plus 64% (64/100) of the incremental price between 1500 and 1600 square feet.

$$49,970 + [(64/100) * 2,480] = \\ 49,970 + 1,587 = 51,557 \text{ or } 51,560 \text{ rounded}$$

c. If the dwelling is of masonry and frame construction (EXTERIOR WALLS = 2), the floor level cost will be the average of the frame and masonry costs for that size area.

d. The prices for all levels present are rounded to the nearest \$10 and added together.

Step 2. - Base Price Adjustments Make the necessary base price adjustments to account for variations from the base specifications. These are addressed in the following paragraphs.

Unfinished Area: A deduction must be made for any area within the living area of the dwelling which lacks interior finish, such as ceiling, wall and floor finish. Deduction is based on square foot.

Heating and Air Conditioning: The base price includes a central heating system. A deduction must be made for "no heating" and non-central systems, and an addition must be made for central air conditioning.

Heating adjustments are made on the basis of the heated area or the total living area. The total living area is the sum of: finished basement living area, first, second, and additional finished floor areas, plus 75% of any half story area and a variable percentage of any attic area, depending on finish (20% of partially finished, 40% of full finished and 55% of full finished at wall height). Using the computed total living area, access the Heating and Air Conditioning adjustments table to determine the appropriate adjustment. Interpolate as needed. Round the result to the nearest \$10.

If the Heated Floor Area is different from the calculated total living area, use the total living area to determine a No-Heat adjustment then *add* back to this the adjustment based on the heated floor area.

Example:

A 1½ story dwelling has heating on the first floor, but no heat in the upper half-story. The ground floor area is 900. Half-story area is calculated 75% of total 900 which is equal to 675. Total living area is 900 + 675 or 1575 sf.

From the No Heat Column:
Total living area 1575 = - 2800
(interpolated and rounded)

Heated Area 900 = - 1910

Add back 1910
to - 2800 - 2800 + 1910 = - 890

If the heated area is also Air Conditioned, add the Air Conditioning adjustment based on the Heated Floor Area.

Plumbing: The base price assumes a "normal" complement of plumbing fixtures for the dwelling determined on the basis of the dwelling grade. An addition or deduction is made for excesses above or deficiencies below these norms. Determine the adjustment from the Plumbing schedule.

<u>Grade</u>	<u>Number of Fixtures</u>
1 - Cheap	0
2 - Poor	4
3 - Low Cost	5
4 - Fair	5
5 - Average	6
6 - Good	9
7 - Very Good	12
8 - Excellent	15

Step 3. - Additions Add the price for all additions, i.e., areas attached to but not included in the dwelling areas. These include: porches, attached garages and carports, built-in garages, and mobile home additions.

The area of the addition should be rounded, for manual pricing, to the nearest 10 square feet and the pricing interpolated from the pricing schedule. The values shown represent points (increments of \$100).

NOTE: *Attached Garages* are garages attached to, but not included in, the area designated as the "base ground floor area".

Built-In Garages are finished garages built into a portion of the dwelling that would normally be considered finished living area and must be described as an Addition to be valued.

Step 4. - Other Features Compute the price of the specified Other Features from the table. Items to be priced as Other Features are Basement Garages, Fireplaces, Finished Basements, Unfinished Areas and the applicable Miscellaneous Other Features. As for additions, the value of Other Features (including chimneys, fireplaces, and basement/built-in garages) is given in points (increments of \$100).

Step 5. - Flat Add Costs Determine if there are any "flat add" costs to be added or subtracted.

Step 6. Subtotal the prices arrived at in Steps 1, 2, 3, 4, and 5.

Step 7. Grade Factor Apply the proper Grade Factor. Refer to the "Estimating Replacement Cost New" Section 41 of this manual for an explanation of the application of grade factor, cost and design factor, and county index. The Grade Factors are listed in Section 42.1.2.

Step 8. Cost and Design Apply the proper Cost and Design Factor. The resulting replacement cost new (RCN) is rounded to the nearest \$10.

Step 9. - Depreciation Apply the appropriate percent good to the RCN. Follow the instructions in Section 47 to calculate a percent good.

Step 10. - Economic Condition Factor Multiply by the local cost modifier and any economic condition factor. Round the resulting replacement cost new less depreciation (RCNLD) to the nearest \$10.

Step 11. - Percent Complete Multiply RCNLD by the percent complete.

Step 12. - Ownership Multiply by percent of ownership to arrive at final appraised value. Round the final result to the nearest \$10.

PART 4: REPLACEMENT COST

42.4. PRICING TABLES

42.4.1. DWELLING BASE PRICING SCHEDULE

AREA	FRAME			MASONRY			AREA	FRAME			MASONRY		
	FIRST STORY	2ND & ADD'L	HALF STORY	FIRST STORY	2ND & ADD'L	HALF STORY		FIRST STORY	2ND & ADD'L	HALF STORY	FIRST STORY	2ND & ADD'L	HALF STORY
300	20160	11690	7020	21370	13100	7790	2300	69840	40510	24310	74030	45370	26980
	2490	1450	860	2640	1610	960		2490	1440	860	2640	1610	960
400	22650	13140	7880	24010	14710	8750	2400	72330	41950	25170	76670	46980	27940
	2480	1440	870	2630	1620	960		2480	1440	860	2630	1620	960
500	25130	14580	8750	26640	16330	9710	2500	74810	43390	26030	79300	48600	28900
	2480	1440	860	2630	1610	960		2480	1440	870	2630	1610	960
600	27610	16020	9610	29270	17940	10670	2600	77290	44830	26900	81930	50210	29860
	2490	1440	860	2630	1610	960		2490	1440	860	2640	1610	960
700	30100	17460	10470	31900	19550	11630	2700	79780	46270	27760	84570	51820	30820
	2480	1440	870	2640	1620	960		2480	1440	870	2630	1620	960
800	32580	18900	11340	34540	21170	12590	2800	82260	47710	28630	87200	53440	31780
	2490	1440	860	2630	1610	960		2490	1440	860	2630	1610	960
900	35070	20340	12200	37170	22780	13550	2900	84750	49150	29490	89830	55050	32740
	2480	1440	870	2630	1610	960		2480	1440	870	2630	1620	960
1000	37550	21780	13070	39800	24390	14510	3000	87230	50590	30360	92460	56670	33700
	2480	1440	860	2640	1620	950		2480	1440	860	2640	1610	950
1100	40030	23220	13930	42440	26010	15460	3100	89710	52030	31220	95100	58280	34650
	2490	1440	870	2630	1610	960		2490	1450	870	2630	1610	960
1200	42520	24660	14800	45070	27620	16420	3200	92200	53480	32090	97730	59890	35610
	2480	1440	860	2630	1610	960		2480	1440	860	2630	1620	960
1300	45000	26100	15660	47700	29230	17380	3300	94680	54920	32950	100360	61510	36570
	2490	1440	870	2640	1620	960		2490	1440	860	2640	1610	960
1400	47490	27540	16530	50340	30850	18340	3400	97170	56360	33810	103000	63120	37530
	2480	1440	860	2630	1610	960		2480	1440	870	2630	1610	960
1500	49970	28980	17390	52970	32460	19300	3500	99650	57800	34680	105630	64730	38490
	2480	1440	860	2630	1610	960		2480	1440	860	2630	1620	960
1600	52450	30420	18250	55600	34070	20260	3600	102130	59240	35540	108260	66350	39450
	2490	1440	870	2640	1620	960		2490	1440	870	2640	1610	960
1700	54940	31860	19120	58240	35690	21220	3700	104620	60680	36410	110900	67960	40410
	2480	1450	860	2630	1610	960		2480	1440	860	2630	1610	960
1800	57420	33310	19980	60870	37300	22180	3800	107100	62120	37270	113530	69570	41370
	2490	1440	870	2630	1620	960		2490	1440	870	2630	1620	960
1900	59910	34750	20850	63500	38920	23140	3900	109590	63560	38140	116160	71190	42330
	2480	1440	860	2630	1610	960		2480	1440	860	2630	1610	960
2000	62390	36190	21710	66130	40530	24100	4000	112070	65000	39000	118790	72800	43290
	2480	1440	870	2640	1610	960		24840	14410	8640	26340	16140	9600
2100	64870	37630	22580	68770	42140	25060	5000	136910	79410	47640	145130	88940	52890
	2490	1440	860	2630	1620	960							
2200	67360	39070	23440	71400	43760	26020							
	2480	1440	870	2630	1610	960							

UNFINISHED AREA

Refers to an area within the living area of the dwelling which lacks interior finish such as Ceiling, Wall and Floor Finish.

Deduct per SF of Unfinished Area: 5.00

42.4.1. DWELLING BASE PRICING SCHEDULE (Cont'd)

AREA	BASEMENT		NO FOUNDATION (DEDUCTION)			ATTIC FINISHED
	FULL OR PARTIAL	CRAWL	SLAB	PIERS	NO FOUND.	
300	3230	1500	90	200	290	3990
400	3630	1680	120	260	380	4480
500	4030	1870	150	330	480	4980
600	4430	2050	180	390	570	5470
700	4830	2240	210	460	670	5960
800	5230	2420	240	520	760	6450
900	5620	2610	270	590	860	6940
1000	6020	2790	300	650	950	7440
1100	6420	2980	330	720	1050	7930
1200	6820	3160	360	780	1140	8420
1300	7220	3350	390	850	1240	8910
1400	7620	3530	420	910	1330	9400
1500	8020	3720	450	980	1430	9890
1600	8410	3900	480	1040	1520	10390
1700	8810	4090	510	1110	1620	10880
1800	9210	4270	540	1170	1710	11370
1900	9610	4460	570	1240	1810	11860
2000	10010	4640	600	1300	1900	12350
2100	10410	4830	630	1370	2000	12850
2200	10800	5010	660	1430	2090	13340
2300	11200	5200	690	1500	2190	13830
2400	11600	5380	720	1560	2280	14320
2500	12000	5570	750	1630	2380	14810
2600	12400	5750	780	1690	2470	15300
2700	12800	5940	810	1760	2570	15800
2800	13190	6120	840	1820	2660	16290
2900	13590	6310	870	1890	2760	16780
3000	13990	6490	900	1950	2850	17270
3100	14390	6670	930	2020	2950	17760
3200	14790	6860	960	2080	3040	18260
3300	15190	7040	990	2150	3140	18750
3400	15590	7230	1020	2210	3230	19240
3500	15980	7410	1050	2280	3330	19730
3600	16380	7600	1080	2340	3420	20220
3700	16780	7780	1110	2410	3520	20710
3800	17180	7970	1140	2470	3610	21210
3900	17580	8150	1170	2540	3710	21700
4000	17980	8340	1200	2600	3800	22190
5000	21960	10190	1500	3250	4750	27110

PART 4: REPLACEMENT COST

42.4.2. BASE PRICE ADJUSTMENTS

42.4.2.1. HEATING AND AIR CONDITIONING ADJUSTMENTS

TOTAL HEATED OR LIVING AREA	NO HEAT (-)	NON-CENTRAL (-)	WITH AIR CONDITIONING	TOTAL HEATED OR LIVING AREA	NO HEAT (-)	NON-CENTRAL (-)	WITH AIR CONDIONING
300	1120	600	890	3300	5050	2790	4160
400	1250	670	1000	3400	5180	2860	4270
500	1390	750	1110	3500	5320	2940	4380
600	1520	820	1210	3600	5450	3010	4480
700	1650	890	1320	3700	5580	3080	4590
800	1780	960	1430	3800	5710	3150	4700
900	1910	1040	1540	3900	5840	3230	4810
1000	2040	1110	1650	4000	5970	3300	4920
1100	2170	1180	1760	4100	6100	3370	5030
1200	2300	1260	1870	4200	6230	3450	5140
1300	2430	1330	1980	4300	6360	3520	5250
1400	2560	1400	2090	4400	6490	3590	5360
1500	2700	1480	2200	4500	6630	3670	5470
1600	2830	1550	2300	4600	6760	3740	5570
1700	2960	1620	2410	4700	6890	3810	5680
1800	3090	1690	2520	4800	7020	3880	5790
1900	3220	1770	2630	4900	7150	3960	5900
2000	3350	1840	2740	5000	7280	4030	6010
2100	3480	1910	2850	5500	7940	4400	6560
2200	3610	1990	2960	6000	8590	4760	7100
2300	3740	2060	3070	6500	9250	5130	7650
2400	3870	2130	3180	7000	9900	5490	8190
2500	4010	2210	3290	7500	10560	5860	8740
2600	4140	2280	3390	8000	11210	6220	9280
2700	4270	2350	3500	8500	11870	6590	9830
2800	4400	2420	3610	9000	12520	6950	10370
2900	4530	2500	3720	9500	13180	7320	10920
3000	4660	2570	3830	10000	13830	7680	11460
3100	4790	2640	3940				
3200	4920	2720	4050				

42.4.2.2. PLUMBING ADJUSTMENTS

Base Price includes the normal number of fixtures for the grade times \$400.

Add: \$400 for each fixture above the normal number for the grade.

Deduct: \$400 for each fixture less than the normal number for the grade.

42.4.3. ADDITIONS

42.4.3.1. PORCHES

(All Prices are in Points)

AREA	FRAME						BRICK OR STONE					
	OPEN		SCREENED		ENCLOSED		OPEN		SCREENED		ENCLOSED	
	FIRST	UPPER	FIRST	UPPER	FIRST	UPPER	FIRST	UPPER	FIRST	UPPER	FIRST	UPPER
20	2	1	3	2	3	2	2	1	3	2	4	2
40	4	2	6	4	7	4	4	3	6	4	7	5
60	6	4	9	5	10	6	6	4	10	6	11	7
80	7	5	11	7	13	8	8	6	13	9	15	9
100	9	6	14	9	17	10	11	7	16	11	18	11
120	11	7	17	11	20	12	13	8	19	13	22	14
140	13	8	20	13	24	14	15	10	23	15	26	16
160	15	9	23	14	27	16	17	11	26	17	29	18
180	17	11	26	16	30	18	19	13	29	19	33	21
200	19	12	29	18	34	20	21	14	32	22	37	23
220	21	13	32	20	37	22	23	15	36	24	40	25
240	22	14	34	22	40	24	25	17	39	26	44	27
260	24	15	37	23	44	26	27	18	42	28	47	30
280	26	16	40	25	47	28	30	20	45	30	51	32
300	28	18	43	27	50	30	32	21	49	32	55	34
320	30	19	46	29	54	32	34	22	52	34	58	37
340	32	20	49	31	57	34	36	24	55	37	62	39
360	34	21	52	32	60	36	38	25	58	39	66	41

42.4.3.2. ATTACHED UTILITY STRUCTURE

(All Prices are in Points)

AREA	FRAME				BRICK OR STONE			
	FINISHED		UNFINISHED		FINISHED		UNFINISHED	
	FIRST	UPPER	FIRST	UPPER	FIRST	UPPER	FIRST	UPPER
20	2	1	2	1	2	2	2	1
40	4	3	3	2	5	4	4	3
60	5	4	5	4	7	6	5	4
80	7	6	6	5	9	8	7	6
100	9	7	8	6	11	9	9	7
120	11	9	9	7	14	11	11	9
140	13	10	11	8	16	13	13	10
160	15	12	12	9	18	15	14	12
180	16	13	14	11	21	17	16	13
200	18	15	15	12	23	19	18	14
220	20	16	17	13	25	21	20	16
240	22	18	18	14	27	23	22	17
260	24	19	20	15	30	25	23	19
280	26	21	21	16	32	26	25	20
300	27	22	23	18	34	28	27	22
320	29	24	24	19	36	30	29	23
340	31	25	26	20	39	32	31	24
360	33	27	28	21	41	34	32	26

PART 4: REPLACEMENT COST

42.4.3. ADDITIONS (Cont'd)

42.4.3.3. ATTACHED GARAGES (All Prices are in Points)

AREA	FRAME		MASONRY		EXTENSIONS	
	FINISHED	UNFINISHED	FINISHED	UNFINISHED	FRAME	MASONRY
20	10	8	14	11	2	2
40	12	9	16	13	3	4
60	14	11	18	15	5	6
80	16	12	21	17	7	9
100	18	13	23	19	8	11
120	19	15	26	20	10	13
140	21	16	28	22	11	15
160	23	18	30	24	13	17
180	25	19	33	26	15	19
200	27	20	35	28	16	21
220	29	22	37	30	18	24
240	30	23	40	32	20	26
260	32	25	42	34	21	28
280	34	26	44	35	23	30
300	36	27	47	37	25	32
320	38	29	49	39	26	34
340	40	30	51	41	28	36
360	42	31	54	43	29	39
380	43	33	56	45	31	41
400	45	34	58	47	33	43
420	47	36	61	49	34	45
440	49	37	63	50	36	47
460	51	38	65	52	38	49
480	53	40	68	54	39	51
500	54	41	70	56	41	54
550	59	45	76	61	45	59
600	64	48	82	66	49	64

PRICE PER SF

OBT	-	ORNAMENTAL BRICK TRIM	6.50
SCA	-	SOLAR COLLECTOR AREA	20.60

42.4.3. ADDITIONS (Cont'd)

42.4.3.4. CARPORT / CANOPY; ATTACHED GREENHOUSE; DECKS; STOOPS
(All Prices are in Points)

AREA	CARPORT/CANOPY			ATTACHED GREENHOUSE	DECKS			STOOPS MASONRY
	FRAME		MASONRY		WOOD	CONCRETE	STONE TILE	
	UNFINISHED	FINISHED						
20	1	2	2	7	1	0	1	1
40	2	4	5	14	1	1	2	2
60	3	5	7	21	2	1	3	4
80	4	7	10	28	3	2	3	5
100	5	9	12	36	4	2	4	6
120	6	11	14	43	4	2	5	7
140	7	12	17	50	5	3	6	8
160	8	14	19	57	6	3	7	10
180	10	16	22	64	6	4	8	11
200	11	18	24	71	7	4	9	12
220	12	20	26	78	8	4	9	13
240	13	21	29	85	9	5	10	14
260	14	23	31	93	9	5	11	16
280	15	25	34	100	10	6	12	17
300	16	27	36	107	11	6	13	18
320	17	28	38	114	12	6	14	19
340	18	30	41	121	12	7	15	20
360	19	32	43	128	13	7	15	22
380	20	34	46	135	14	8	16	23
400	21	36	48	142	14	8	17	24

42.5. OTHER FEATURES

42.5.1. BASEMENT GARAGES

Refers to any garage located within that area of a dwelling priced as a basement. Price includes doors, enclosure walls, interior finish and lighting.

Add per item:	1 Car Garage	900	4 Car Garage	1,700
	2 Car Garage	1,200	5 Car Garage	2,000
	3 Car Garage	1,450		

42.5.2. MASONRY FIREPLACES

Add per item: Stack and One Opening 2,200 Each Additional Opening Same Stack 1,100

PART 4: REPLACEMENT COST

42.5.3. PREFABRICATED METAL FIREPLACES / STOVES

Add per stack: 1,500

42.5.4. MISCELLANEOUS OTHER FEATURES

Add per item:

BD	Built-In Dishwasher	370	E2	Residential Elevator (2-Stop)	6,675
BF	Built-In Refrigerator	1,645	E3	Residential Elevator (3-Stop)	7,655
BI	Built-In's from conversion	100/point	EF	Exhaust Fan	90
BM	Built-In Microwave Oven	485	GD	Garbage Disposal	135
BO	Built-In Oven	510	IC	Intercom System	405
BR	Built-In Range	280	MS	Miscellaneous Built-in's	100/point
BT	Built-In Trash Compactor	375	SB	Spa Bathtub	2,355
CV	Central Vacuum System	945	SL	Stair Lift	2,670
			SS	Security System	945

42.5.5. FINISHED BASEMENT AREA

Minimal Refers to a relatively open undivided area finished with a cheap quality of materials and workmanship inconsistent with the main living area of the dwelling. Price includes Interior Wall Finish, Flooring, Ceiling and Lighting.

Add per SF of Finished Area: 2.86 Add per SF for Air Conditioning: .90

Fair Refers to an area with minimal partitioning finished with low-quality materials and workmanship that is below the quality of the main living area of the dwelling. Price includes Interior Wall Finish, Flooring, Ceiling, Partitioning and Lighting.

Add per SF of Finished Area: 7.28 Add per SF for Air Conditioning: .90

Typical Refers to a divided area finished with a quality of materials and workmanship consistent with the main living area of the dwelling...such as in the lower or grade level of split-level and bi-level dwellings. Price includes Interior Wall Finish, Flooring, Ceiling, Partitioning and Lighting.

Add per SF of Finished Area: 11.69 Add per SF for Air Conditioning: .90

Good Refers to a divided basement area finished with a quality of materials and workmanship higher than that of the main living area of the dwelling. Price includes Interior Wall Finish, Flooring, Ceiling, Partitioning and Lighting.

Add per SF of Finished Area: 15.60 Add per SF for Air Conditioning: .90

43. MOBILE HOMES

TABLE OF CONTENTS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE
43.1.	QUALITY GRADE SPECIFICATIONS	1	43.2.4.	GRADE E - EXCELLENT QUALITY MOBILE HOMES	9
43.1.1.	INTRODUCTION	1	43.3.	MOBILE HOME CLASSIFICATION GUIDE	10
43.1.2.	QUALITY GRADES AND FACTORS	1	43.3.1.	MANUFACTURERS ORDER	10
43.2.	QUALITY GRADE SPECIFICATIONS AND PHOTOGRAPHS	2	43.3.2.	MODEL NAME ORDER	24
43.2.1.	GRADE L - LOW COST QUALITY MOBILE HOMES	2	43.4.	MANUAL PRICING INSTRUCTIONS	38
43.2.2.	GRADE A - AVERAGE QUALITY MOBILE HOMES	5	43.5.	PRICING TABLES	40
43.2.3.	GRADE G - GOOD QUALITY MOBILE HOMES	6	43.5.1.	MOBILE HOME RATES	40
			43.5.2.	HEATING AND AIR CONDITIONING ADJUSTMENTS	41
			43.5.3.	LIVING AREA ADDITIONS	42

43.1. QUALITY GRADE SPECIFICATIONS

43.1.1. INTRODUCTION

The base cost of a mobile home is determined by the quality of construction. Determining the quality of both materials and workmanship is fundamental when assigning an overall quality grade. Quality of materials and workmanship in individual building components will vary, but will tend to influence each other and an overall quality grade will tend to be consistent throughout the residence.

It is the appraiser's responsibility to weigh the quality of all the building components and assign a quality grade that best represents the total residence.

Consideration should be given not only to quality of materials and workmanship used, but to complexity of design and layout. Lower quality mobile homes are usually simple in design and reflect lower cost. Higher quality usually includes more complexity in design, with more attention given to layout and detail. Higher quality mobile homes are generally larger in size than those of lower quality.

The general descriptions given for each grade are guidelines that emphasize the most prominent characteristics of mobile homes within that grade. They are not meant to be exact specifications. Mobile homes that do not typically represent the basic grade can more accurately be valued by using a plus or minus grade variation.

Photographs of each grade of mobile home are also to be used as guidelines. An accurate quality grade cannot always be assigned based on exterior appearance. Interior layout and finish can greatly influence cost and must be considered when assigning a quality grade.

43.1.2. QUALITY GRADES AND FACTORS

For mobile homes, the residential system uses an alphabetic grading scale with a range of grades from a low of L (low cost construction) to a high of E (excellent construction). Plus (+) and minus (-) adjustments are allowed within each category. The relative value ranges are indicated by the following table.

	<u>Grade</u>	<u>Value Range</u>
L -	Low Cost	- .43
		.49
		+ .55
A -	Average	- .62
		.68
		+ .74
G -	Good	- .79
		.85
		+ .90
E -	Excellent	- .95
		1.00
		+ 1.10

43.2. QUALITY GRADE SPECIFICATIONS AND PHOTOGRAPHS

**43.2.1. GRADE L - LOW COST QUALITY
MOBILE HOMES**

Low cost quality mobile homes are generally built to minimum construction standards established by the industry and most states. Workmanship and materials are of below average quality, with little or no attention to design. Ceiling height is typically 7' - 7'6".

FOUNDATION - Set up on steel or concrete piers.
EXTERIOR - Wood frame, prepainted lightweight aluminum siding with exposed fasteners; low cost windows with minimal fenestration; no trim or ornamentation.

ROOF - Flat or slightly arched roofs, trusses with metal roofing; no eaves or overhang.

FLOORS - Wood floor joists, with plywood or particle board subflooring supported by a light steel undercarriage; low cost carpet or asphalt tile floor covering.

INTERIOR - Low quality printed or hardboard paneling; low cost paint grade or vinyl covered particle board cabinets; low cost hollow core doors, minimal closets.

HEATING - Forced warm air system or equal for moderate climate, with thermostat and automatic fired furnace.

PLUMBING - Includes 5 low cost white fixtures: any combination of lavatory, toilet, bathtub, shower, kitchen sink and hot water heater; and a laundry hookup. Plumbing is usually located along one side of the trailer, with minimal runs.

ELECTRICAL - Minimal low cost light fixtures and electrical outlets.

INSULATION - Included in base cost.

GRADE L - LOW COST QUALITY MOBILE HOMES



GRADE A - AVERAGE QUALITY MOBILE HOMES



**43.2.2. GRADE A - AVERAGE QUALITY
MOBILE HOMES**

Average quality mobile homes will usually meet or exceed mobile home code requirements. Materials and workmanship are of average quality. Ceiling height is typically 7'6" - 8'0".

FOUNDATION - Set up on steel or concrete piers.
EXTERIOR - Wood frame, aluminum siding, aluminum windows with adequate fenestration; front elevation will usually have some ornamentation.

ROOF - Sloped or arched roofs, trusses with metal roofing. No eaves, front overhang.

FLOORS - Wood floor joists, with plywood or particle board subflooring, supported by rigid steel beam undercarriage; average quality carpet or vinyl composition floor covering.

INTERIOR - Medium quality paneling, vinyl covered or inexpensive wood veneer cabinets, laminated plastic countertops, standard hollow core doors, adequate closet space.

HEATING - Forced warm air system or equal for moderate climate, with thermostat and automatic fired furnace.

PLUMBING - 7 average quality white or colored fixtures; any combination of lavatory, toilet, bathtub, shower, kitchen sink, and hot water heater; and a laundry hookup.

ELECTRICAL - Ample number of lighting fixtures and outlets.

INSULATION - Included in the base cost schedule.

43.2.3. GRADE G - GOOD QUALITY MOBILE HOMES

Good quality mobile homes will generally exceed minimum mobile home code requirements. With these mobile homes some detail and ornamentation is given to interior finishes and exterior design. These mobile homes typically have 8'0" ceiling height.

FOUNDATION - Set up on steel or concrete piers.

EXTERIOR - Wood frame, hardboard siding, aluminum windows with good fenestration.

ROOF - Low to medium pitch, trusses with sheathing, composition shingles or metal; minimal eaves.

FLOORS - Wood floor joists, with plywood or particle board subflooring, supported by rigid steel beam under-carriage; good quality carpet or vinyl flooring.

INTERIOR - Good quality paneling or vinyl wall covering, painted or vinyl veneer cabinets, laminated plastic countertops, veneered hollow core doors, ample closet space.

HEATING - Forced warm air system or equal for moderate climate, with thermostat and automatic fired furnace.

PLUMBING - 8 good quality white or colored fixtures, fixtures include any combination of lavatory, toilet, kitchen sink, bathtub, shower, kitchen sink, and hot water heater; and a laundry hookup.

ELECTRICAL - Ample number of good quality lights and outlets.

INSULATION - Included in base cost of mobile home.

GRADE G - GOOD QUALITY MOBILE HOMES



GRADE E - EXCELLENT QUALITY MOBILE HOMES



**43.2.4. GRADE E - EXCELLENT QUALITY
MOBILE HOMES**

Excellent quality mobile homes will exceed minimum requirements of mobile home codes. Exterior and interior finishes start to approach the quality of those found in site-built residences, with attention given to ornamentation and trim. Ceiling heights are typically 8'0".

FOUNDATION - Set up on steel or concrete piers.

EXTERIOR - Wood frame, hardboard or wood siding, good fenestration, with wood or good quality aluminum windows; some ornamental trim.

ROOF - Low to medium pitch, trusses, with sheathing and composition shingles, and moderate eaves.

FLOORS - Wood floor joists, with plywood or particle board subflooring, supported by rigid steel beam under-carriage, excellent quality carpet or vinyl floor covering.

INTERIOR - Excellent hardwood paneling or vinyl-covered drywall, wood veneer cabinets with laminated plastic countertops, very good wood veneer doors, walk-in closets or large wardrobes; ceilings may be cathedral or sloped.

HEATING - Forced warm air system or equal for severe climate, with thermostat and automatic fired furnace.

PLUMBING - 8 excellent quality white or colored fixtures; any combination of lavatory, toilet, bathtub, shower, kitchen sink, and hot water heater; and a laundry hookup.

ELECTRICAL - Numerous lighting fixtures and outlets.

INSULATION - Included in the base cost schedule.

PART 4: REPLACEMENT COST

43.3. MOBILE HOME CLASSIFICATION GUIDE

43.3.1. MANUFACTURERS ORDER

EXAMPLE: 14'-1983<, means a 14 ft. mobile home built in 1983 or before.
24'-1979>, means a 24 ft. mobile home built in 1979 or after.

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
ALLEN	BON PRIX	12'-1984<, 14'-1983<, 24'-1977<	Low Cost
ALLEN	BON PRIX	12'-1985>, 14'-1984>, 24'-1978>	Average
ALLEN	FOUR SEASONS	12'&14'-1982<, 24'-1980<	Low Cost
ALLEN	FOUR SEASONS	12'&14'-1983>, 24'-1981>	Average
ALSEACO	ALL SEASONS	12'-1982<, 14'-1981<	Low Cost
ALSEACO	ALL SEASONS	12'-1983>, 14'-1982>	Average
AMERICAN WAY	AMERICAN WAY	12'&14'-1986<	Low Cost
AMERICAN WAY	AMERICAN WAY	12'&14'-1987>	Average
ANCHOR	BELMONT	12'-1986<, 14'-1984<, 24'-1978<	Low Cost
ANCHOR	BELMONT	12'-1987>, 14'-1985>, 24'-1979>	Average
APACHE	APACHE	12'-1981<	Low Cost
APACHE	APACHE	12'-1982>	Average
ARGUS	ARGUS	14'-1983<	Low Cost
ARGUS	ARGUS	14'-1984>	Average
ARTCRAFT	ARTCRAFT	12'-1981<, 14'-1983<, 24'-1984<	Low Cost
ARTCRAFT	ARTCRAFT	12'-1982>, 14'-1984>, 24'-1985>	Average
ARTCRAFT	BRENTVILLA	14'-1985<	Low Cost
ARTCRAFT	BRENTVILLA	14'-1986>	Average
ASTRO	ASTRO	14'-1976<	Low Cost
ASTRO	ASTRO	14'-1977>	Average
ASTRO	ASTRO	14'-1987>	Good
ATCO	ARTIC MANOR	14'-1979<	Low Cost
ATCO	ARTIC MANOR	14'-1980>	Average
ATCO	ATCO	14'-1976<	Low Cost
ATCO	ATCO	14'-1977-1984	Average
ATCO	ATCO	14'-1985>	Good
ATCO	GENTRY	12'-1982<, 14'-1979<, 20'-1978<	Low Cost
ATCO	GENTRY	24'-1981<	Low Cost
ATCO	GENTRY	12'-1983>, 14'-1980>, 20'-1979>	Average
ATCO	GENTRY	24'-1982>	Average
ATCO	GENTRY-CUSTOM	24'-1978<	Low Cost
ATCO	GENTRY-CUSTOM	24'-1979>	Average
ATCO	RIDEAU	12'-1984<, 14'-1982<, 16' ALL	Low Cost
ATCO	RIDEAU	24'-1978<	Low Cost
ATCO	RIDEAU	12'-1985>, 14'-1983>, 24'-1979>	Average
AZTEC	AZTEC	12'-1981<, 14'-1979<, 24'-1978<	Low Cost
AZTEC	AZTEC	12'-1982>, 14'-1980>, 24'-1979>	Average
BENDIX	BENDIX	12'-1986<, 14'-1979<, 20'-1978<	Low Cost
BENDIX	BENDIX	24'-1981<	Low Cost
BENDIX	BENDIX	12'-1987>, 14'-1980>, 20'-1979>	Average
BENDIX	BENDIX	24'-1982>	Average
BENDIX-BOISE	BOISE-CASCADE	12'-1986<, 14'-1979<, 24'-1983<	Low Cost
BENDIX-BOISE	BOISE-CASCADE	12'-1987>, 14'-1980>, 24'-1984>	Average
BENDIX-BOISE	BROOKWOOD	12'&24'-1982<, 14'-1978<, 20'-1981<	Low Cost
BENDIX-BOISE	BROOKWOOD	12'&24'-1983>, 14'-1979>, 20'-1982>	Average
BENDIX-BOISE	GENERAL	12'&14'-1984<, 24'-1977<	Low Cost
BENDIX-BOISE	GENERAL	12'&14'	Average
BENDIX-BOISE	STAR	12'-1984<, 14'-1986<, 24'-1981<	Low Cost
BENDIX-BOISE	STAR	12'-1985>, 14'-1987>, 24'-1982>	Average
BENDIX-BOISE	WESTBROOK	12'-1986<, 24'-1978<	Low Cost
BENDIX-BOISE	WESTBROOK	12'-1987>, 24'-1979>	Average
BENDIX-BOISE	WESTWOOD	12'-1986<, 14'-1983<, 24'-1981<	Low Cost
BENDIX-BOISE	WESTWOOD	12'-1987>, 14'-1984>, 24'-1985>	Average
BIG SKY	BIG SKY	14'-1981<, 16'-1978<, 28'-1975<	Low Cost
BIG SKY	BIG SKY	14'-1982>, 16'-1979>, 28'-1976>	Average

43. MOBILE HOMES

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
BRENTWOOD	BRENTWOOD	12'-1985<, 14'-1986<, 24'-1981<	Low Cost
BRENTWOOD	BRENTWOOD	12'-1986>, 14'-1987>, 24'-1982>	Average
CENTRAL	CAMELOT	14'&16'-1984<, 24'&26'-1981<	Low Cost
CENTRAL	CAMELOT	28'-1977<	Low Cost
CENTRAL	CAMELOT	14'&16'-1985>, 24'&26'-1982>	Average
CENTRAL	CAMELOT	28'-1978-1986	Average
CENTRAL	CAMELOT	28'-1987>	Good
CENTRAL	CENTENNIAL	14'-1978<, 16'-1977<, 24'-1974<	Low Cost
CENTRAL	CENTENNIAL	14'-1979>, 16'-1978-1984,	Average
CENTRAL	CENTENNIAL	24'-1975>	Average
CENTRAL	CENTENNIAL	16'-1985>	Good
CENTRAL	CENTRAL	12'-1978<, 14'-1981<, 16'-1982<	Low Cost
CENTRAL	CENTRAL	24'-1977<	Low Cost
CENTRAL	CENTRAL	12'-1979-1986, 14'-1982>, 16'-1983>	Average
CENTRAL	CENTRAL	24'-1977-1986, 28'-1984<	Average
CENTRAL	CENTRAL	12'&24'-1987>, 28'-1983-1986	Good
CENTRAL	CENTRAL	28'-1987>	Excellent
CENTRAL	COLUMBINE	12'&14'&28'-1977<, 24'-1974<	Low Cost
CENTRAL	COLUMBINE	12'&14'&28'-1979-1986,	Average
CENTRAL	COLUMBINE	24'-1975-1984	Average
CENTRAL	COLUMBINE	12'&14'&28'-1987>, 24'-1985>	Good
CENTRAL	GREAT NORTHERN	14'&16'-1981<, 24'-1979<, 26'-1976<	Low Cost
CENTRAL	GREAT NORTHERN	14'&16'-1982>, 24'-1980>	Average
CENTRAL	GREAT NORTHERN	26'-1977-1986	Average
CENTRAL	GREAT NORTHERN	26'-1987>	Good
CENTRAL	MONTCLAIR	12'-1982<, 14'&28'-1977<, 16'-1980<	Low Cost
CENTRAL	MONTCLAIR	12'-1983>, 14'&28'-1978-1986,	Average
CENTRAL	MONTCLAIR	16'-1981>, 24'-1982<, 26'-1986<	Average
CENTRAL	MONTCLAIR	14'-1987>, 14'& 28'-1987>	Good
CENTRAL	MONTROSE	12'-1982<, 14'&28'-1977, 16'-1980<	Low Cost
CENTRAL	MONTROSE	12'-1983>, 14'&28'-1978-1986,	Average
CENTRAL	MONTROSE	16'-1981>, 24'-1982<, 26'-1986<	Average
CENTRAL	MONTROSE	14'-1987>, 14'& 28'-1987>	Good
CENTURY	ALPINE CENTURIAN	14'&16'-1975<	Low Cost
CENTURY	ALPINE CENTURIAN	14'&16'-1976-1982, 24'&26'-1981<	Average
CENTURY	ALPINE CENTURIAN	14'&16'-1983-1985	Good
CENTURY	ALPINE CENTURIAN	24'&26'-1982-1985	Good
CENTURY	ALPINE CENTURY	ALL SIZES 1986>	Excellent
CENTURY	ALPINE CENTURY	12'&16'-1976<, 14'-1978<	Low Cost
CENTURY	ALPINE CENTURY	12'&16'-1977-1983, 14'-1979-1985	Average
CENTURY	ALPINE CENTURY	24'-1982<	Average
CENTURY	ALPINE CENTURY	12'&16'-1984>, 14'-1986>	Good
CENTURY	ALPINE CENTURY	24'-1983-1985	Good
CENTURY	ALPINE CENTURY	24'-1986>	Excellent
CENTURY	ALPINE LEADER	14'-1975<	Low Cost
CENTURY	ALPINE LEADER	14'-1976-1982	Average
CENTURY	ALPINE LEADER	14'-1983>	Good
CENTURY	ALPINE MARK II	14'-1980<, 16'-1981<, 24'-1978<	Average
CENTURY	ALPINE MARK II	14'-1981-1985, 16'-1982-1985	Good
CENTURY	ALPINE MARK II	24'-1979-1984	Good
CENTURY	ALPINE MARK II	14'&16'-1986>, 24'-1985>	Excellent
CENTURY	ALPINE PRESTIGE	16'-1973<	Low Cost
CENTURY	ALPINE PRESTIGE	14'-1980<, 16'-1974-1980	Average
CENTURY	ALPINE PRESTIGE	24'&28'-1977<	Average
CENTURY	ALPINE PRESTIGE	14'&16'-1981-1984,	Good
CENTURY	ALPINE PRESTIGE	24'&28'-1978-1982	Good
CENTURY	ALPINE PRESTIGE	14'&16'-1985>, 24'&28'-1983>	Excellent
CENTURY	CARMEL	12'-1981<, 14'&20'-1978<	Low Cost
CENTURY	CARMEL	24'&28'-1975<	Low Cost
CENTURY	CARMEL	12'-1982>, 14'&20'-1979-1985	Average
CENTURY	CARMEL	24'&28'-1976-1983	Average
CENTURY	CARMEL	14'&20'-1986>, 24'&28'-1984>	Good
CENTURY	CENTURY	12', 24'&28'-1973<, 14'-1978<	Low Cost
CENTURY	CENTURY	16'-1976<	Low Cost
CENTURY	CENTURY	12', 24'&28'-1974-1982	Average

PART 4: REPLACEMENT COST

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
CENTURY	CENTURY	14'-1979-1985, 16'-1977-1983	Average
CENTURY	CENTURY	12', 24'&28'-1983>, 14'-1986>	Good
CENTURY	CENTURY	16'-1984>	Good
CENTURY	CLASSIC	ALL SIZES 1982<	Average
CENTURY	CLASSIC	ALL SIZES 1983>	Good
CENTURY	CLASSIC	14'-1986>	Excellent
CHAMPION	ATLANTIC	ALL SIZES 1981<	Low Cost
CHAMPION	ATLANTIC	ALL SIZES 1982>	Average
CHAMPION	CONCORD	12'&24'-1981<, 14'-1984<	Low Cost
CHAMPION	CONCORD	12'&24'-1982>, 14'-1985>	Average
CHAMPION	DELUXE	14'-1981<	Low Cost
CHAMPION	DELUXE	14'-1982>	Average
CHAMPION	HUNTINGTON	14'&16'-1981<, 24'-1975<	Low Cost
CHAMPION	HUNTINGTON	28'-1979<	Low Cost
CHAMPION	HUNTINGTON	14'&16'-1982>, 24'-1976>	Average
CHAMPION	HUNTINGTON	28'-1980>	Average
CHAMPION	MANATEE	ALL SIZES 1984<	Low Cost
CHAMPION	MANATEE	ALL SIZES 1985>	Average
CHAMPION	SEQUOIA	12'&14'-1983<, 24'&28'-1981<	Low Cost
CHAMPION	SEQUOIA	12'&14'-1984>, 24'&28'-1982>	Average
CHAMPION	SUNVIEW	12'&24'-1981<, 14'-1984<	Low Cost
CHAMPION	SUNVIEW	12'&24'-1982>, 14'-1985>	Average
CHAMPION	TAMARACK	ALL SIZES 1984<	Low Cost
CHAMPION	TAMARACK	ALL SIZES 1985>	Average
CHAMPION	TAMMARON	24'-1981<	Low Cost
CHAMPION	TAMMARON	24'-1982>	Average
CHAMPION	TITAN	12'-1986<, 14'-1985<	Low Cost
CHAMPION	TITAN	24'-1983<, 28'-1979<	Low Cost
CHAMPION	TITAN	14'-1985>, 24'-1984>, 28'-1980>	Average
CHAMPION	WOODLAKE	12'&14'-1985<, 24'-1983<	Low Cost
CHAMPION	WOODLAKE	28'-1984<	Low Cost
CHAMPION	WOODLAKE	12'&14'-1986>, 24'-1984>, 28'-1985>	Average
CHICKASHA	BLAIRHOUSE	ALL SIZES 1982>	Average
CHICKASHA	BLAIRHOUSE	ALL SIZES 1981<	Low Cost
CHICKASHA	CHICKASHA	12'&14'-1983<, 16'-1978<, 24'-1976<	Low Cost
CHICKASHA	CHICKASHA	12'&14'-1984>, 16'-1979>	Average
CHICKASHA	CHICKASHA	24'-1977-1985	Average
CHICKASHA	CHICKASHA	24'-1986>	Good
CHICKASHA	CREST	12'&14'-1983<, 16'-1978<, 24'-1976<	Low Cost
CHICKASHA	CREST	12'&14'-1984>, 16'-1979>	Average
CHICKASHA	CREST	24'-1977-1985	Average
CHICKASHA	CREST	24'-1986>	Good
CHICKASHA	INVADER	12'-1985<, 14'-1984<	Low Cost
CHICKASHA	INVADER	12'-1986>, 14'-1985>	Average
CHICKASHA	MEDALLION	ALL SIZES 1981<	Low Cost
CHICKASHA	MEDALLION	ALL SIZES 1982>	Average
CHICKASHA	METAMORA	ALL SIZES 1981<	Low Cost
CHICKASHA	METAMORA	ALL SIZES 1982>	Average
CHICKASHA	SUPERIOR	12'-1983<, 14'-1985<	Low Cost
CHICKASHA	SUPERIOR	12'-1984>, 14'-1986>	Average
CHIEF IND	BELLAVISTA	12', 14'&24'-1982<, 16'-1979<	Low Cost
CHIEF IND	BELLAVISTA	12', 14'&24'-1983>, 16'-1980>	Average
CHIEF IND	BELLAVISTA	28'-1985<	Average
CHIEF IND	BELLAVISTA	24'&28'-1986>	Good
CHIEF IND	BONNAVILLA	12', 14'&24'-1981<, 16'-1974<	Low Cost
CHIEF IND	BONNAVILLA	28'-1978<	Low Cost
CHIEF IND	BONNAVILLA	12'&24'-1982-1985, 14'-1982>	Average
CHIEF IND	BONNAVILLA	16'-1975-1985, 28'-1979-1984	Average
CHIEF IND	BONNAVILLA	12', 16'&24'-1986>, 28'-1985>	Good
COMMODORE	BROOKWOOD	20'-1980<	Low Cost
COMMODORE	BROOKWOOD	20'-1981>, 24'-1984<	Average
COMMODORE	BROOKWOOD	24'-1985>	Good
COMMODORE	CITATION	12'-1980<, 14'-1981<, 24'-1979<	Low Cost
COMMODORE	CITATION	28'-1981<	Low Cost
COMMODORE	CITATION	12'-1981>, 14'-1982>, 24'-1980>	Average

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
COMMODORE	CITATION	28'-1982>	Average
COMMODORE	CLASSIC	14'-1985<, 20'-1980<, 24'-1981<	Low Cost
COMMODORE	CLASSIC	28'-1984<	Low Cost
COMMODORE	CLASSIC	14'-1986>, 20'-1981>, 24'-1982>	Average
COMMODORE	CLASSIC	28'-1985>	Average
COMMODORE	COMET	14'-1985<, 24'&28'-1981<	Low Cost
COMMODORE	COMET	14'-1986>, 24'&28'-1982>	Average
COMMODORE	COMMANDER	14'-1983<, 24'-1979<, 28'-1981<	Low Cost
COMMODORE	COMMANDER	14'-1984>, 24'-1980>, 28'-1982>	Average
COMMODORE	ELCAR	24'-1980<, 28'-1982<	Average
COMMODORE	ELCAR	24'-1981-1985, 28'-1983>	Good
COMMODORE	ELCAR	24'-1986>	Excellent
COMMODORE	FRONTIER	12'-1985<, 14'-1983<, 24'-1981<	Low Cost
COMMODORE	FRONTIER	12'-1986>, 14'-1984>, 24'-1982>	Average
COMMODORE	GALAXY	14'&28'-1983<, 24'-1981<	Low Cost
COMMODORE	GALAXY	14'&28'-1984>, 24'-1982>	Average
COMMODORE	GUARDIAN	14'-1985<, 20'-1980<, 24'-1981<	Low Cost
COMMODORE	GUARDIAN	28'-1984<	Low Cost
COMMODORE	GUARDIAN	14'-1986>, 20'-1981>, 24'-1982>	Average
COMMODORE	GUARDIAN	28'-1985>	Average
COMMODORE	KOZY	14'-1983<, 24'-1979<, 28'-1981<	Low Cost
COMMODORE	KOZY	14'-1984>, 24'-1980>, 28'-1982>	Average
COMMODORE	MANOR	12'-1980<, 14'-1981<, 24'-1979<	Low Cost
COMMODORE	MANOR	28'-1981<	Low Cost
COMMODORE	MANOR	12'-1981>, 14'-1982>, 24'-1980>	Average
COMMODORE	MANOR	28'-1982>	Average
COMMODORE	NOVA	12'-1981<, 14'-1985<, 20', 24'&28'-1983<	Low Cost
COMMODORE	NOVA	12'-1982>, 14'-1986>	Average
COMMODORE	NOVA	20', 24'&28'-1984>	Average
COMMODORE	PACIFICA	24'-1979<, 28'-1981<	Low Cost
COMMODORE	PACIFICA	24'-1980>, 28'-1982>	Average
COMMODORE	PAN AMERICAN	24'-1984<	Average
COMMODORE	PAN AMERICAN	24'-1985>	Good
COMMODORE	PARAMOUNT	14'-1980<, 21'-1981<	Low Cost
COMMODORE	PARAMOUNT	14'-1981>, 20'-1982>, 24'-1983<	Average
COMMODORE	PARAMOUNT	28'-1985<	Average
COMMODORE	PARAMOUNT	24'-1984>, 28'-1986>	Good
COMMODORE	SAFEWAY	12'-1985<, 14'-1982<, 24'-1981<	Low Cost
COMMODORE	SAFEWAY	12'-1986>, 14'-1983>, 24'-1982>	Average
COMMODORE	SHELBY	12'-1982<, 14'-1978<, 24'-1979<	Low Cost
COMMODORE	SHELBY	12'-1983>, 14'-1979>, 24'-1980>	Average
COMMODORE	WILLOWOOD	12'-1980<, 14'-1981<, 20'-1983<	Low Cost
COMMODORE	WILLOWOOD	24'-1983<	Low Cost
COMMODORE	WILLOWOOD	12'-1981>, 14'-1982>, 20'-1984>	Average
COMMODORE	WILLOWOOD	24'-1984-1985, 28'-1984<	Average
COMMODORE	WILLOWOOD	24'-1986>, 28'-1985>	Good
CONCHEMCO	CONCHEMCO	12'-1985<, 14'-1981<, 24'-1978<	Low Cost
CONCHEMCO	CONCHEMCO	28'-1976<	Low Cost
CONCHEMCO	CONCHEMCO	12'-1986>, 14'-1982>, 24'-1979>	Average
CONCHEMCO	CONCHEMCO	28'-1977-1985	Average
CONCHEMCO	CONCHEMCO	28'-1986>	Good
CONCHEMCO	GOVERNOR	12'-1983<, 14'-1978<	Low Cost
CONCHEMCO	GOVERNOR	12'-1984>, 14'-1979>	Average
CONCHEMCO	NASHUA	12'-1981<, 14'-1982<, 24'-1979<	Low Cost
CONCHEMCO	NASHUA	12'-1982>, 14'-1983>	Average
CONCHEMCO	NASHUA	24'-1978-1985	Average
CONCHEMCO	NASHUA	24'-1986>	Good
CONCHEMCO	PACESETTER	12'-1984<, 14'-1985<	Low Cost
CONCHEMCO	PACESETTER	12'-1985>, 14'-1986>	Average
CONCHEMCO	WESTCHESTER	12'&14'-1984<, 24'-1981<	Low Cost
CONCHEMCO	WESTCHESTER	12'&14'-1985>, 24'-1982>	Average
CONTINENTAL	CRAFTMADE	14'-1974<, 16'-1975<, 28'-1974<	Low Cost
CONTINENTAL	CRAFTMADE	14'-1975-1981, 16'-1976-1982	Average
CONTINENTAL	CRAFTMADE	28'-1975-1983	Average

PART 4: REPLACEMENT COST

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
CONTINENTAL	CRAFTMADE	14'-1982-1985, 16'-1983>	Good
CONTINENTAL	CRAFTMADE	28'-1984>	Good
CONTINENTAL	CRAFTMADE	14'-1986>	Excellent
CONTINENTAL	CRAFTMARK	14'-1975<, 16', 24'&28'-1975<	Low Cost
CONTINENTAL	CRAFTMARK	14'-1976-1983	Average
CONTINENTAL	CRAFTMARK	16', 24'&28	Average
CONTINENTAL	CRAFTMARK	14'-1984>, 16, 24'&28'-1985>	Good
CONTINENTAL	HIGH COUNTRY	14'&16'-1979<	Low Cost
CONTINENTAL	HIGH COUNTRY	14'&16'-1980-1985, 24'-1982<	Average
CONTINENTAL	HIGH COUNTRY	28'-1981<	Average
CONTINENTAL	HIGH COUNTRY	14'&16'-1986>, 24'-1983>	Good
CONTINENTAL	HIGH COUNTRY	28'-1982-1985	Good
CONTINENTAL	HIGH COUNTRY	28'-1986>	Excellent
CONTINENTAL	PARKMONT	14'&16'-1979<, 14'&16'-1980-1985, 24'-1982<	Low Cost
CONTINENTAL	PARKMONT	26'-1981<	Average
CONTINENTAL	PARKMONT	14'&16'-1986>, 24'-1983>	Good
CONTINENTAL	PARKMONT	26'-1982-1985	Good
CONTINENTAL	PARKMONT	26'-1986>	Excellent
CONTINENTAL	WESTMONT	14'-1979<, 16'-1973<	Low Cost
CONTINENTAL	WESTMONT	14'-1980-1985, 16'-1974-1981	Average
CONTINENTAL	WESTMONT	24'-1982<, 24'&28'-1982<	Average
CONTINENTAL	WESTMONT	14'-1986>, 16'-1982>, 24'-1983>	Good
CONTINENTAL	WESTMONT	26'&28'-1982-1985	Good
CONTINENTAL	WESTMONT	26'&28'-1986>	Excellent
CONTINENTAL	WESTPARK	14'&16'-1979<	Low Cost
CONTINENTAL	WESTPARK	14'&16'-1980-1985, 24'-1982<	Average
CONTINENTAL	WESTPARK	28'-1981<	Average
CONTINENTAL	WESTPARK	14', 16'-1986>, 24'-1983>	Good
CONTINENTAL	WESTPARK	26'-1982-1985	Good
CONTINENTAL	WESTPARK	26'-1986>	Excellent
DEROSE	ROSEWOOD	16'-1985>	Average
DEROSE	VICTOR	12'&14'ALL YEARS, 16'-1982<	Low Cost
DEROSE	VICTOR	16'-1983>	Average
DMH	DETROITER	12'-1981<, 14'-1981<, 24'-1977<	Low Cost
DMH	DETROITER	12'-1982>, 14'-1982>, 24'-1978>	Average
DMH	REVERE	12'-1981<, 14'-1981<, 24'-1977<	Low Cost
DMH	REVERE	12'-1982>, 14'-1982>, 24'-1978>	Average
ELKHART	ELKHART	12', 14'-1973<	Low Cost
ELKHART	ELKHART	12', 14'-1974-1982	Average
ELKHART	ELKHART	12', 14'-1983>	Good
FALCON COACH	FALCON	14'-1978<, 24'-1977<	Low Cost
FALCON COACH	FALCON	14'-1979>, 24'-1978-85	Average
FALCON COACH	FALCON	24'-1986>	Good
FLEETWOOD	ACCENT	12', 14'-1973<, 12', 14'-1983<	Low Cost
FLEETWOOD	ACCENT	12', 14'-1984>	Average
FLEETWOOD	BARRINGTON	12'-1976<, 14'-1978<, 24'&28'1981<	Low Cost
FLEETWOOD	BARRINGTON	12'-1977-1985, 14'-1979>, 26'-1985<	Average
FLEETWOOD	BARRINGTON	24'&28'1982>	Average
FLEETWOOD	BARRINGTON	12', 26'-1986>	Good
FLEETWOOD	BROADMORE	12'-1985<, 14'-1984<, 24'-1977<	Low Cost
FLEETWOOD	BROADMORE	12'-1986>, 14'-1985>, 24'-1978>, 28'-1977-1985	Average
FLEETWOOD	BROADMORE	28'-1986>	Average
FLEETWOOD	BROADMORE	28'-1986>	Good
FLEETWOOD	BROOKFIELD	24'-1983<, 28'-1984<	Low Cost
FLEETWOOD	BROOKFIELD	24'-1983>, 28'-1984>	Average
FLEETWOOD	BROOKWOOD	24'-1983<, 28'-1984<	Low Cost
FLEETWOOD	BROOKWOOD	24'-1983>, 28'-1984>	Average
FLEETWOOD	CHADWICK	24'&28'-1984<	Low Cost
FLEETWOOD	CHADWICK	24'&28'-1985>	Average
FLEETWOOD	CROWNPOINTE	12'-1976<, 14'-1978<, 24'&28'1981<	Low Cost
FLEETWOOD	CROWNPOINTE	12'-1977-1985, 14'-1979>, 26'-1985<	Average
FLEETWOOD	CROWNPOINTE	24'&28'1982>	Average
FLEETWOOD	CROWNPOINTE	12', 26'-1986>	Good
FLEETWOOD	FLEETWOOD	12', 14'-ALL YEARS, 24'&28'-1978<	Low Cost

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
FLEETWOOD	FLEETWOOD	24'x28'-1979>	Average
FLEETWOOD	GLENBROOK	12'-1985<, 14'-1984<, 24'-1981<	Low Cost
FLEETWOOD	GLENBROOK	28'-1979<	Low Cost
FLEETWOOD	GLENBROOK	12'-1986>, 14'-1985>, 24'-1982>	Average
FLEETWOOD	GLENBROOK	28'-1980>	Average
FLEETWOOD	HIGHLAND PARK	24'-1979<, 28'-1979<	Low Cost
FLEETWOOD	HIGHLAND PARK	24'-1980-1985, 26'-1985<, 28'-1982>	Average
FLEETWOOD	HIGHLAND PARK	24', 26'x28'-1986>	Good
FLEETWOOD	MEDFORD	12'-1985<, 14'-1984<, 24'-1981<	Low Cost
FLEETWOOD	MEDFORD	28'-1979<	Low Cost
FLEETWOOD	MEDFORD	12'-1986>, 14'-1985>, 24'-1982>	Average
FLEETWOOD	MEDFORD	28'-1980>	Average
FLEETWOOD	SANDPOINTE	12', 14'-1973<, 12', 14'-1983<	Low Cost
FLEETWOOD	SANDPOINTE	12', 14'-1984>	Average
FLEETWOOD	VOGUE	12'-1979<, 14'-1980<, 24'-1975<	Low Cost
FLEETWOOD	VOGUE	12'-1980-1985, 14'-1981>, 24'-1976-1985	Average
FLEETWOOD	VOGUE	12'-1986>, 24'-1986>	Good
FLEETWOOD	WESTFIELD	12'-1979<, 14'-1980<, 24'-1975<	Low Cost
FLEETWOOD	WESTFIELD	12'-1980-1985, 14'-1981>, 24'-1976-1985	Average
FLEETWOOD	WESTFIELD	12'-1986>, 24'-1986>	Good
FLEETWOOD	WESTON	12'x14'-1984<, 24'-1977<	Low Cost
FLEETWOOD	WESTON	12'x14'-1985>, 24'-1978>	Average
FUQUA	BELAIRE	12'x14'-1981<, 20'-1981<, 24'-1977<	Low Cost
FUQUA	BELAIRE	12'x14'-1982-1985, 20'-1982>	Average
FUQUA	BELAIRE	24'-1978-1984	Average
FUQUA	BELAIRE	12'x14'-1986>, 24', 26'x28'-1985>	Good
FUQUA	CAREFREE	14'-1980<, 24'-1973<	Low Cost
FUQUA	CAREFREE	14'-1981>, 24'-1974-1985	Average
FUQUA	CAREFREE	26'x28'-1984<	Average
FUQUA	CAREFREE	26'x28'-1985>, 24'-1986>	Good
FUQUA	CASCADE	16'-1981<	Low Cost
FUQUA	CASCADE	16'-1982-85, 24'-1983<, 26'-1983<	Average
FUQUA	CASCADE	16'-1986>, 24'-1984-85, 26'-1984>	Good
FUQUA	CASCADE	24'-1986>	Excellent
FUQUA	CEDARBROOK	24'-1981<, 28'-1982<	Average
FUQUA	CEDARBROOK	24'-1982-85, 28'-1983-85	Good
FUQUA	CEDARBROOK	24'x28'-1986>	Excellent
FUQUA	CHALLENGER	12'x14'-1977<	Low Cost
FUQUA	CHALLENGER	12'x14'-1978-84	Average
FUQUA	CHALLENGER	12'x14'-1985>	Good
FUQUA	CHAPARREL	12'x14'-1977<	Low Cost
FUQUA	CHAPARREL	12'x14'-1978-84	Average
FUQUA	CHAPARREL	12'x14'-1985>	Good
FUQUA	FUQUA	12'x14'-1979<, 24'-1977<	Low Cost
FUQUA	FUQUA	12'x14'-1980-85, 24'-1978-84	Average
FUQUA	FUQUA	12'x14'-1986>, 24'-1985>	Good
FUQUA	GULFSTREAM	14'-1981<, 24'-1978<	Low Cost
FUQUA	GULFSTREAM	14'-1982>, 24'-1979-85	Average
FUQUA	GULFSTREAM	24'-1986>	Good
FUQUA	LANDMARK	14'-1979<	Low Cost
FUQUA	LANDMARK	14'-1980-86	Average
FUQUA	LANDMARK	14'-1987>	Good
FUQUA	PARKWAY	12', 14'x24'-1979<, 20'-1981<	Low Cost
FUQUA	PARKWAY	12'x24'-1980-84, 14'-1980-85,	Average
FUQUA	PARKWAY	20'-1982-85, 26'-1981<	Average
FUQUA	PARKWAY	12'x24'-1985>, 14'x20'-1986>, 26'-1982>	Good
FUQUA	QUEENSTOWN	14'-1979<	Low Cost
FUQUA	QUEENSTOWN	14'-1980-86, 24'x26'-1984<	Average
FUQUA	QUEENSTOWN	14'-1987>, 24'-1985>, 26'-1984-86	Good
FUQUA	QUEENSTOWN	26'-1987	Excellent
FUQUA	WESTRIDGE	24'-1980<, 28'-1983<	Average
FUQUA	WESTRIDGE	24'-1982-86, 28'-1984-86	Good
FUQUA	WESTRIDGE	24'x28'-1987>	Excellent
GALAXY	GALAXY	ALL SIZES/YEARS	Low Cost
GALLATIN	CHATEAU	ALL SIZES 1979<	Low Cost
GALLATIN	CHATEAU	ALL SIZES 1980>	Average

PART 4: REPLACEMENT COST

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
GALLATIN	CIMMARRON	14'-1981<, 16'&28'-1979<	Low Cost
GALLATIN	CIMMARRON	14'-1982>, 16'&18'-1980>	Average
GALLATIN	GALLATIN	14'-1979<, 16'-1981<	Low Cost
GALLATIN	GALLATIN	14'-1980>, 16'-1982>	Average
GALLATIN	LAKEWOOD	ALL SIZES 1977<	Low Cost
GALLATIN	LAKEWOOD	ALL SIZES 1978-85	Average
GALLATIN	LAKEWOOD	ALL SIZES 1986>	Good
GEER	GEER	14'-1977<	Low Cost
GEER	GEER	14'-1978-85	Average
GEER	GEER	14'-1985>	Good
GERRING	HOLLYPARK	14'-1978<	Low Cost
GERRING	HOLLYPARK	14'-1974-1983	Average
GERRING	HOLLYPARK	14'-1984>	Good
GLEN RIVER	GLENWOOD	14'-1985<, 26'-1981<	Average
GLEN RIVER	GLENWOOD	14'-1986>, 26'-1982>	Good
GOLDEN WEST	CALYPSO	12'-1982<, 24'-1976<	Low Cost
GOLDEN WEST	CALYPSO	12'-1982>, 24'-1977-1985	Average
GOLDEN WEST	CALYPSO	24'-1986>	Good
GUERDON	AIRLINER	12'-1977<	Low Cost
GUERDON	AIRLINER	12'-1978-84	Average
GUERDON	AIRLINER	12'-1985>	Good
GUERDON	ARMOR	12'-1977<	Low Cost
GUERDON	ARMOR	12'-1978-84	Average
GUERDON	ARMOR	12'-1985>	Good
GUERDON	ASTRA	10'-1981<, 12'-1982<, 14'-1984<	Low Cost
GUERDON	ASTRA	10'-1982>, 12'-1983>, 14'-1985>	Average
GUERDON	ATLAS	12',24'&28'-1978<, 14'-1981<	Low Cost
GUERDON	ATLAS	12',24'&28'-1978-85, 14'-1982>	Average
GUERDON	ATLAS	12',24'&28'-1986>	Good
GUERDON	BAYCREST	14'-1984<	Low Cost
GUERDON	BAYCREST	14'-1985>	Average
GUERDON	CAMELOT	12'-ALL YEARS, 24'-1978<	Low Cost
GUERDON	CAMELOT	24'-1979>	Average
GUERDON	CRANBROOK	14'&24'-1982<	Low Cost
GUERDON	CRANBROOK	14'&24'-1983>	Average
GUERDON	EMBASSY	12'-1984<, 14'-1977<	Low Cost
GUERDON	EMBASSY	12'-1985>, 14'-1978-85	Average
GUERDON	EMBASSY	14'-1986>	Good
GUERDON	ESQUIRE	14'-1984<	Low Cost
GUERDON	ESQUIRE	14'-1985>	Average
GUERDON	FUTURAMA	12'-1983<, 14'-1985<	Low Cost
GUERDON	FUTURAMA	12'-1984>, 14'-1986>	Average
GUERDON	GREAT LAKES	12',14'&16'-1981<, 24'-1975<	Low Cost
GUERDON	GREAT LAKES	12',14'&16'-1982>, 24'-1976-1984	Average
GUERDON	GREAT LAKES	28'-1984<	Average
GUERDON	GREAT LAKES	24'&28'-1985>	Good
GUERDON	GUERDON	12'&14'-1983<, 20'-1978<, 28'-1977<	Low Cost
GUERDON	GUERDON	12'&14'-1984>, 20'-1979-85	Average
GUERDON	GUERDON	24'-1982<, 28'-1978-1984	Average
GUERDON	GUERDON	20'-1986>, 24'-1982-85, 28'-1985>	Good
GUERDON	GUERDON	24'-1986>	Excellent
GUERDON	HACIENDA	12'-1983<, 14'&24'-1978<, 28'-1974<	Low Cost
GUERDON	HACIENDA	12'-1984>, 14'&24'-1979-85	Average
GUERDON	HACIENDA	28'-1975-1984	Average
GUERDON	HACIENDA	14'&24'-1986>, 28'-1985>	Good
GUERDON	MAGNOLIA	12',14'&20'-1977<	Low Cost
GUERDON	MAGNOLIA	12',14'&20'-1978-84, 24'-1981<	Average
GUERDON	MAGNOLIA	12',14'&20'-1985>, 24'-1982-1985	Good
GUERDON	MAGNOLIA	24'-1986>	Excellent
GUERDON	MAYFLOWER	14'-1978<, 24'-1977<	Low Cost
GUERDON	MAYFLOWER	14'-1979-85, 24'-1978-85	Average
GUERDON	MAYFLOWER	14'&24'-1986>	Good
GUERDON	MEADOWBROOK	14'-1984<	Low Cost
GUERDON	MEADOWBROOK	14'-1985>	Average
GUERDON	NORMANDY	14'-1978<, 24'-1977<	Low Cost

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
GUERDON	NORMANDY	14'-1979-85, 24'-1978-85	Average
GUERDON	NORMANDY	14'&24'-1986>	Good
GUERDON	OAKMANOR	16'-1980<	Low Cost
GUERDON	OAKMANOR	16'-1981>	Average
GUERDON	OAKMANOR	14'-1980<, 24'-1973<, 28'-1981<	Low Cost
GUERDON	OAKMANOR	14'-1981>, 24'-1974-86, 28'-1982>	Average
GUERDON	OAKMANOR	24'-1986>	Good
GUERDON	OAKVILLA	14'-1980<, 24'-1973<, 28'-1981<	Low Cost
GUERDON	OAKVILLA	14'-1981>, 24'-1974-86, 28'-1982>	Average
GUERDON	OAKVILLA	24'-1986>	Good
GUERDON	STATLER	14'-1981<, 24'-1973<	Low Cost
GUERDON	STATLER	14'-1982>, 24'-1974-1984	Average
GUERDON	STATLER	24'-1985>	Good
GUERDON	TWIN LAKES	12',24'&28'-1978<, 14'-1981<	Low Cost
GUERDON	TWIN LAKES	12',24'&28'-1978-85, 14'-1982>	Average
GUERDON	TWIN LAKES	12',24'&28'-1986>	Good
GUERDON	VAGABOND	ALL SIZES 1981<	Low Cost
GUERDON	VAGABOND	ALL SIZES 1982>	Average
GUERDON	VAN DYKE	12',14'&24'-1978<, 20'-1981<	Low Cost
GUERDON	VAN DYKE	28'-1973<	Low Cost
GUERDON	VAN DYKE	12',14'&24'-1979-85, 20'-1982>	Average
GUERDON	VAN DYKE	28'-1974-1984	Average
GUERDON	VAN DYKE	12',14'&24'-1986>, 28'-1985>	Good
GUERDON	WOOD HAVEN	12',14'&16'-1981<, 24'-1975<	Low Cost
GUERDON	WOOD HAVEN	12',14'&16'-1982>, 24'-1976-1984	Average
GUERDON	WOOD HAVEN	28'-1984<	Average
GUERDON	WOOD HAVEN	24'&28'-1985>	Good
HARMONY	GIBRALTOR	12'&14'-1984<	Low Cost
HARMONY	GIBRALTOR	12'&14'-1985>	Average
HARMONY	SHERIDAN	12'&24'-1979<, 14'-1981<	Low Cost
HARMONY	SHERIDAN	12'&24'-1980>, 14'-1982>	Average
HOUSE/HARMONY	CARRIAGE HOUSE	14'-1974<, 24'-1973<	Low Cost
HOUSE/HARMONY	CARRIAGE HOUSE	14'-1975-81, 24'-1974-81, 28'-1981<	Average
HOUSE/HARMONY	CARRIAGE HOUSE	14'-1982>, 24'-1982-85, 28'-1982-84	Good
HOUSE/HARMONY	CARRIAGE HOUSE	24'-1986>, 28'-1985>	Excellent
HOUSE/HARMONY	HOUSE/HARMONY	12'-1982<	Low Cost
HOUSE/HARMONY	HOUSE/HARMONY	12'-1983>	Average
INTERNATIONAL	NEWPORT	14'-1984<	Low Cost
INTERNATIONAL	NEWPORT	14'-1985>	Average
KAUFMAN/BROAD	BAINBRIDGE	12'&14'-1981<, 20'-1979<, 24'-1983<	Low Cost
KAUFMAN/BROAD	BAINBRIDGE	12'&14'-1982>, 20'-1980>, 24'-1984>	Average
KAUFMAN/BROAD	BAYWOOD	28'-1980<, 24'-1986<, 28'-1981-87	Low Cost
KAUFMAN/BROAD	BAYWOOD	24'-1987>, 28'-1988>	Average
KAUFMAN/BROAD	BILTMORE	12',14'&28'-1981<, 24'-1979<	Good
KAUFMAN/BROAD	BILTMORE	12',14'&28'-1982>, 24'-1980>	Low Cost
KAUFMAN/BROAD	CANYON CREST	12',14'&28'-1981<, 24'-1979<	Average
KAUFMAN/BROAD	CANYON CREST	12',14'&28'-1982>, 24'-1980>	Low Cost
KAUFMAN/BROAD	WAYSIDE	12'&14'-1981<, 20'-1979<, 24'-1983<	Average
KAUFMAN/BROAD	WAYSIDE	12'&14'-1982>, 20'-1980>, 24'-1984>	Low Cost
KAUFMAN/BROAD	WOODLAND	14'-1982<	Average
KAUFMAN/BROAD	WOODLAND	14'-1983>	Low Cost
KAUFMAN/BROAD	1800 SERIES	14'-1982<	Average
KAUFMAN/BROAD	1800 SERIES	14'-1983>	Low Cost
KAUFMAN/BROAD	700 SERIES	24'-1985<	Average
KAUFMAN/BROAD	700 SERIES	24'-1986>	Good
KAUFMAN/BROAD	8800 SERIES	24'-1977<, 26'-1980<	Low Cost
KAUFMAN/BROAD	8800 SERIES	24'-1978-87, 28'-1981>	Average
KAUFMAN/BROAD	8800 SERIES	24'-1988>	Good
KAUFMAN/BROAD	900 SERIES	28'-1980<, 24'-1986<, 28'-1981-87	Low Cost
KAUFMAN/BROAD	900 SERIES	24'-1987>, 28'-1988>	Average
KAUFMAN/BROAD	900 SERIES	24'-1987>, 28'-1988>	Good
KENTWOOD	KENTWOOD	12'-1985<, 14'&24'-1979<	Low Cost
KENTWOOD	KENTWOOD	12'-1986>, 14'-1980-87, 24'-1980>	Average

PART 4: REPLACEMENT COST

MANUFACTURER	MODEL NAME	WIOTH - YEAR CONSTRUCTION	QUALITY
KENTWOOD	KENTWOOD	14'-1988>	Good
KIT	COUNTY SQUIRE	12'-1978<, 14'-1981<	Low Cost
KIT	COUNTY SQUIRE	12'-1979-85, 14'-1982>	Average
KIT	COUNTY SQUIRE	12'-1986>	Good
KIT	FAIRVIEW	12'-1978<, 14'-1981<	Low Cost
KIT	FAIRVIEW	12'-1979-85, 14'-1982>	Average
KIT	FAIRVIEW	12'-1986>	Good
KIT	GOLDEN STATE	14'-1975<, 28'-1973<	Low Cost
KIT	GOLDEN STATE	14'-1976-85, 24'-1984<, 28'-1974-85	Average
KIT	GOLDEN STATE	14'&28'-1986>, 24'-1985>	Good
KIT	KIT	12'-1981<, 14'-1980<, 24'-1977<	Low Cost
KIT	KIT	28'-1974<	Low Cost
KIT	KIT	12'-1982>, 14'-1981>, 24'-1975-84	Average
KIT	KIT	28'-1975-1985	Average
KIT	KIT	24'-1985>, 28'-1986>	Good
KIT	OLYMPIA	12'-1981<, 14'-1980<, 24'-1977<	Low Cost
KIT	OLYMPIA	28'-1974<	Low Cost
KIT	OLYMPIA	12'-1982>, 14'-1981>, 24'-1975-84	Average
KIT	OLYMPIA	28'-1975-1985	Average
KIT	OLYMPIA	24'-1985>, 28'-1986>	Good
KIT	REGAL	14'-1975<, 28'-1973<	Low Cost
KIT	REGAL	14'-1976-85, 24'-1984<, 28'-1974-85	Average
KIT	REGAL	14'&28'-1986>, 24'-1985>	Good
KIT	ROYAL OAKS	14'&28'-1981<, 24'-1974<	Low Cost
KIT	ROYAL OAKS	14'&28'-1982>, 24'-1975-1985	Average
KIT	ROYAL OAKS	24'-1986>	Good
KIT	SIERRA	14'-1981<, 24'-1977<	Low Cost
KIT	SIERRA	14'-1982>, 24'-1978-84	Average
KIT	SIERRA	24'-1985>	Good
KIT	STONEHAVEN	14'-1975<, 28'-1973<	Low Cost
KIT	STONEHAVEN	14'-1976-85, 24'-1984<, 28'-1974-85	Average
KIT	STONEHAVEN	14'&28'-1986>, 24'-1985>	Good
KIT	VENTURA	14'-1984<, 14'-1985>	Low Cost
KIT	VENTURA	14'-1985>	Average
LANCER	LANCER	12'-1979<, 14'-1976<, 20'-1977<	Low Cost
LANCER	LANCER	24'-1981<, 28'-1973<	Low Cost
LANCER	LANCER	12'-1980>, 14'-1977-84, 20'-1978-85	Average
LANCER	LANCER	24'-1982>, 28'-1974-1982	Average
LANCER	LANCER	14'-1985>, 20'-1986>, 28'-1983>	Good
LIBERTY	HAWTHORN	12', 14'&24'-1981<	Low Cost
LIBERTY	HAWTHORN	12', 14'&24'-1982>	Average
LIBERTY	LIBERTY	12'-1984<, 14'-1985<, 24'-1979<	Low Cost
LIBERTY	LIBERTY	12'-1985>, 14'-1986>, 24'-1980>	Average
LIBERTY	MINUTEMAN	12'&14'-1985<, 24'-1979<	Low Cost
LIBERTY	MINUTEMAN	12'&14'-1986>, 24'-1980>	Average
LIBERTY	OAKBROOK	12'&14'-1985<, 24'-1979<	Low Cost
LIBERTY	OAKBROOK	12'&14'-1986>, 24'-1980>	Average
LIBERTY	PEERLESS	12'&14'-1985<, 24'-1979<	Low Cost
LIBERTY	PEERLESS	12'&14'-1986>, 24'-1980>	Average
LIBERTY	RIDGEWOOD	12'&14'-1985<, 24'-1979<	Low Cost
LIBERTY	RIDGEWOOD	12'&14'-1986>, 24'-1980>	Average
MAJESTIC	JUBILEE	14'-1978<	Low Cost
MAJESTIC	JUBILEE	14'-1979-87	Average
MAJESTIC	JUBILEE	14'-1988>	Good
MAJESTIC	MAJESTIC	14'-1983<, 24'-1976<	Low Cost
MAJESTIC	MAJESTIC	14'-1984>, 24'-1977-1986	Average
MAJESTIC	MAJESTIC	24'-1987>	Good
MANN	TRENTON	12'-1982<, 14'-1980<	Low Cost
MANN	TRENTON	12'-1983>, 14'-1981>	Average
MARLETTE	MARLETTE	14'&20'-1979<	Low Cost
MARLETTE	MARLETTE	12'-1986<, 14'&20'-1980>, 24'-1985<	Average
MARLETTE	MARLETTE	12'-1987>, 24'-1986>	Good
MELODY HOMES	CAREFREE	12'-1981<, 14'-1982<	Low Cost
MELODY HOMES	CAREFREE	12'-1982>, 14'-1983>	Average
MELODY HOMES	MELODY	12'&14'-1984<, 24'&28'-1982<	Low Cost
MELODY HOMES	MELODY	12'&14'-1985>, 24'&28'-1983>	Average

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
MODULINE	ARDMORE	14'-1982<, 28'-1981<	Low Cost
MODULINE	ARDMORE	14'-1983>, 24'-1987<, 28'-1982>	Average
MODULINE	ARDMORE	24'-1988>	Good
MODULINE	BEDFORD	14'-1982<, 28'-1981<	Low Cost
MODULINE	BEDFORD	14'-1983>, 24'-1987<, 28'-1982>	Average
MODULINE	BEDFORD	24'-1988>	Good
MODULINE	CANDLEWOOD	14'-1982<, 28'-1981<	Low Cost
MODULINE	CANDLEWOOD	14'-1983>, 24'-1987<, 28'-1982>	Average
MODULINE	CANDLEWOOD	24'-1988>	Good
MODULINE	CANYON CREST	12'-1982<, 14'-1983<, 28'-1982<	Low Cost
MODULINE	CANYON CREST	12'-1983>, 14'-1984>, 24'-1987<	Average
MODULINE	CANYON CREST	28'-1983>	Average
MODULINE	CANYON CREST	24'-1988>	Good
MODULINE	CORINTHIAN	12'-1982<, 14'-1983<, 28'-1982<	Low Cost
MODULINE	CORINTHIAN	12'-1983>, 14'-1984>, 24'-1987<	Average
MODULINE	CORINTHIAN	28'-1983>	Average
MODULINE	CORINTHIAN	24'-1988>	Good
MODULINE	DARTMOUTH	14'-1982<, 28'-1981<	Low Cost
MODULINE	DARTMOUTH	14'-1983>, 24'-1987<, 28'-1982>	Average
MODULINE	DARTMOUTH	24'-1988>	Good
MODULINE	GIBRALTER	12'-1980<, 14'-1982<, 28'-1982<	Low Cost
MODULINE	GIBRALTER	12'-1981-87, 14'&28'-1983>, 24'-1987<	Average
MODULINE	GIBRALTER	12'&24'-1988>	Good
MODULINE	LAMPLIGHTER	12'&24'-1982<, 14'-1980<	Low Cost
MODULINE	LAMPLIGHTER	12'&24'-1983>, 14'-1981>	Average
MODULINE	OLYMPIAN	12'&24'-1982<, 14'-1980<	Low Cost
MODULINE	OLYMPIAN	12'&24'-1983>, 14'-1981>	Average
MODULINE	WOODRIDGE	12'-1980<, 14'-1982<, 28'-1982<	Low Cost
MODULINE	WOODRIDGE	12'-1981-87, 14'&28'-1983>, 24'-1987<	Average
MODULINE	WOODRIDGE	12'&24'-1988>	Good
MONARCH	MONARCH	24'-1977<	Low Cost
MONARCH	MONARCH	24'-1978-1987	Average
MONARCH	MONARCH	24'-1988>	Good
NATIONAL	AQUARIUS	12'&14'-1987<	Low Cost
NATIONAL	AQUARIUS	12'&14'-1988>	Average
NATIONAL	NATIONAL	12'-1985<, 14'-1983<, 24'-1982<	Low Cost
NATIONAL	NATIONAL	12'-1986>, 14'-1984>, 24'-1983>	Average
NOBILITY	KINGSWOOD	14'-1986<, 16'-1981<, 24'-1980<	Low Cost
NOBILITY	KINGSWOOD	12'&28'-1985<	Low Cost
NOBILITY	KINGSWOOD	12'&28'-1986>, 14'-1987>, 16'-1982>, 24'-1981>	Average
NOBILITY	KINGSWOOD	16'-1982>, 24'-1981>	Average
PARKWOOD	PARKWOOD	12'-1981<, 14'-1983<	Low Cost
PARKWOOD	PARKWOOD	12'-1982>, 14'-1984>	Average
REDMAN	BRIGHTON	12'-1987<, 14'-1984<, 24'-1980<, 28'-1983<	Low Cost
REDMAN	BRIGHTON	12'-1988>, 14'-1985>, 24'-1981>	Average
REDMAN	BRIGHTON	28'-1984>	Average
REDMAN	EATON PARK	12'-1985<, 14'-1986<, 24'-1979<	Low Cost
REDMAN	EATON PARK	12'-1986>, 14'-1987>, 24'-1980>	Average
REDMAN	FLAMINGO	12'-1985<, 14'-1986<, 24'-1979<	Low Cost
REDMAN	FLAMINGO	12'-1986>, 14'-1987>, 24'-1980>	Average
REDMAN	GRANVILLE	12'-1987<, 14'-1985<	Low Cost
REDMAN	GRANVILLE	12'-1988>, 14'-1986>	Average
REDMAN	HALLMARK	12'&14'-1987<	Low Cost
REDMAN	HALLMARK	12'&14'-1988>	Average
REDMAN	KIRKWOOD	12'&28'-1987<, 14'-1985<, 24'-1982<	Low Cost
REDMAN	KIRKWOOD	12'&28'-1988>, 14'-1986>, 24'-1983>	Average
REDMAN	LYNN HAVEN	12'&28'-1987<, 14'-1985<, 24'-1982<	Low Cost
REDMAN	LYNN HAVEN	12'&28'-1988>, 14'-1986>, 24'-1983>	Average
REDMAN	NEW MOON	12'-1987<, 14'-1984<, 24'-1980<, 28'-1983<	Low Cost
REDMAN	NEW MOON	28'-1983<	Low Cost
REDMAN	NEW MOON	12'-1988>, 14'-1985>, 24'-1981>	Average
REDMAN	NEW MODN	28'-1984>	Average
REDMAN	REDMAN	12'-1986<, 14'-1984<, 24'-1980<	Low Cost
REDMAN	REDMAN	26'-1983<	Low Cost

PART 4: REPLACEMENT COST

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
REDMAN	REDMAN	12'-1987>, 14'-1985>, 24'-1981>	Average
REDMAN	REDMAN	26'-1984>	Average
REDMAN	SEVILL	12'-1986<, 14'-1984<, 24'-1980<	Low Cost
REDMAN	SEVILL	26'-1983<	Low Cost
REDMAN	SEVILL	12'-1987>, 14'-1985>, 24'-1981>	Average
REDMAN	SEVILL	26'-1984>	Average
REGAL	REGAL	14'-1980<	Low Cost
REGAL	REGAL	14'-1981>, 28'-1983<	Average
REGAL	REGAL	28'-1984>	Good
ROLLOHOME	ROLLOHOME	12'-1978<, 14'-1981<, 16'-1976<	Low Cost
ROLLOHOME	ROLLOHOME	12'-1979-1986, 14'-1982>, 16'-1977-85	Average
ROLLOHOME	ROLLOHOME	14'-1987>, 16'-1986>	Good
ROYAL	WESTERNER	12'-1983<, 14'-1982<, 24'-1978<	Low Cost
ROYAL	WESTERNER	12'-1984>, 14'-1983>, 24'-1979-1987	Average
ROYAL	WESTERNER	24'-1988>	Good
RUSHMORE	RUSHMORE HOME	14'-1979<, 16'-1977<	Low Cost
RUSHMORE	RUSHMORE HOME	14'-1980-1987, 16'-1978-1985	Average
RUSHMORE	RUSHMORE HOME	14'-1988>, 16'-1986>	Good
SCHULT	AMBASSADOR	12'-1986<, 14'-1987<, 24'-1979<	Low Cost
SCHULT	AMBASSADOR	14'-1987>, 16'-1988>, 24'-1980-1987	Average
SCHULT	AMBASSADOR	24'-1988>	Good
SCHULT	CHALLENGER	14'-1982<	Low Cost
SCHULT	CHALLENGER	14'-1983>	Average
SCHULT	CHATEAU	14'-1984<, 16'-1983<	Low Cost
SCHULT	CHATEAU	14'-1985>, 16'-1984>	Average
SCHULT	CITATION	14'-1979<, 16'-1985<	Low Cost
SCHULT	CITATION	14'-1980-1986, 16'-1986>	Average
SCHULT	CITATION	14'-1987>	Good
SCHULT	CUSTOM	12'-1978<, 14'-1980<, 16'-1982<	Low Cost
SCHULT	CUSTOM	12'-1979-1984, 14'-1981>, 16'-1983>	Average
SCHULT	CUSTOM	12'-1985>	Good
SCHULT	HOMESTEAD	14'-1980<	Low Cost
SCHULT	HOMESTEAD	14'-1981-1985	Average
SCHULT	HOMESTEAD	14'-1986>	Good
SHAR LO HOMES	ADRIAN	12'-1988>	Average
SHAR LO HOMES	ADRIAN	12'-1987<	Low Cost
SHELTEREX	BROOKDALE	12'&14'-1979<, 24'-1978<	Low Cost
SHELTEREX	BROOKDALE	12'-1980-1987, 14'-1980>, 24'-1979-1987	Average
SHELTEREX	BROOKDALE	12'-1988>, 24'-1988>	Good
SHELTEREX	PONDEROSA	12'&24'-1978<, 14'-1980<	Low Cost
SHELTEREX	PONDEROSA	12'&24'-1979-1987, 14'-1981>	Average
SHELTEREX	PONDEROSA	12'&24'-1988>	Good
SHELTEREX	SECURITY	12'-1983<, 14'-1985<, 24'-1976<	Low Cost
SHELTEREX	SECURITY	12'-1984>, 14'-1986>, 24'-1977-1987	Average
SHELTEREX	SECURITY	24'-1988>	Good
SHELTEREX	SHELTEREX	12'-1983<, 14'-1985<, 24'-1976<	Low Cost
SHELTEREX	SHELTEREX	12'-1984>, 14'-1986>, 24'-1977-1987	Average
SHELTEREX	SHELTEREX	24'-1988>	Good
SHELTEREX	VANTAGE	12'-1978<, 14'-1979<, 24'-1977<	Low Cost
SHELTEREX	VANTAGE	12'-1979-1987, 14'-1980>, 24'-1978-87	Average
SHELTEREX	VANTAGE	12'&24'-1988>	Good
SILVERCREST	SILVERCREST	12'-1983<, 20'-1979<, 24'-1975<	Low Cost
SILVERCREST	SILVERCREST	12'-1984>, 20'-1980>, 24'-1976-1987	Average
SILVERCREST	SILVERCREST	24'-1988>	Good
SKYLINE	ACADEMY	12'&24'-1982<, 14'-1986<, 20'-1978<	Low Cost
SKYLINE	ACADEMY	12'&24'-1983>, 14'-1987>, 20'-1979-1986	Average
SKYLINE	ACADEMY	20'-1987>	Good
SKYLINE	BUDDY	12'-1983<, 14'-1982<, 20'&24'-1980	Low Cost
SKYLINE	BUDDY	28'-1979<	Low Cost
SKYLINE	BUDDY	12'-1984>, 14'-1983>, 20'&24'-1981>	Average
SKYLINE	BUDDY	28'-1980>	Average
SKYLINE	CAMERON	12'-1987<, 14'-1985<, 20'-1982<	Low Cost
SKYLINE	CAMERON	24'-1979<	Low Cost
SKYLINE	CAMERON	12'-1988>, 14'-1986>, 20'-1983>	Average
SKYLINE	CAMERON	24'-1980>	Average

43. MOBILE HOMES

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
SKYLINE	COMMANDER	12'&14'-1983<	Low Cost
SKYLINE	COMMANDER	12'&14'-1984>	Average
SKYLINE	CUSTOM	14'-1981<, 24'-1979<	Low Cost
SKYLINE	CUSTOM	12'-1982>, 24'-1980>	Average
SKYLINE	DEERFIELD	12'&14'-1983<	Low Cost
SKYLINE	DEERFIELD	12'&14'-1984>	Average
SKYLINE	HILLCREST	12'-1987<, 14'-1984<, 20'-1985	Low Cost
SKYLINE	HILLCREST	24'-1980<, 28'-1979<	Low Cost
SKYLINE	HILLCREST	12'-1988>, 14'-1985>, 20'-1986>	Average
SKYLINE	HILLCREST	24'-1981>, 28'-1980>	Average
SKYLINE	HOMETTE	12'-1987<, 14'-1985<, 20'-1982<	Low Cost
SKYLINE	HOMETTE	24'-1980<, 28'-1975<	Low Cost
SKYLINE	HOMETTE	12'-1988>, 14'-1986>, 20'-1983>	Average
SKYLINE	HOMETTE	24'-1981>, 28'-1976-1987	Average
SKYLINE	HOMETTE	28'-1988>	Good
SKYLINE	OAK COVE	14'-1984<, 16'-1985<, 24'-1975<	Low Cost
SKYLINE	OAK COVE	28'-1982<	Low Cost
SKYLINE	OAK COVE	14'-1985>, 16'-1986>, 24'-1976-1987	Average
SKYLINE	OAK COVE	28'-1983>	Average
SKYLINE	OAK COVE	24'-1988>	Good
SKYLINE	OAK MANOR	14'-1984<, 16'-1985<, 24'-1975<	Low Cost
SKYLINE	OAK MANOR	28'-1982<	Low Cost
SKYLINE	OAK MANOR	14'-1985>, 16'-1986>, 24'-1976-1987	Average
SKYLINE	OAK MANOR	28'-1983>	Average
SKYLINE	OAK MANOR	24'-1988>	Good
SKYLINE	SKYLINE	12'-1987<, 14'-1985<, 20'-1982<	Low Cost
SKYLINE	SKYLINE	24'-1980<, 28'-1975<	Low Cost
SKYLINE	SKYLINE	12'-1988>, 14'-1986>, 20'-1983>	Average
SKYLINE	SKYLINE	24'-1981>, 28'-1976-1987	Average
SKYLINE	SKYLINE	28'-1988>	Good
SKYLINE	SPRINGBROOK	14'&16'-1983<	Low Cost
SKYLINE	SPRINGBROOK	14'&16'-1984>	Average
SKYLINE	SUNVALLEY	12'-1983<, 14'-1987<, 24'-1977<	Low Cost
SKYLINE	SUNVALLEY	12'-1984>, 14'-1988>, 24'-1978-1987	Average
SKYLINE	SUNVALLEY	24'-1988>	Good
SKYLINE	SUNWOOD	12'-1983<, 14'-1987<, 24'-1977<	Low Cost
SKYLINE	SUNWOOD	12'-1984>, 14'-1988>, 24'-1978-1987	Average
SKYLINE	SUNWOOD	24'-1988>	Good
SPACEMASTER	SPACEMASTER	12'-1984<, 24'-1986<	Low Cost
SPACEMASTER	SPACEMASTER	12'-1985-1987, 24'-1987>	Average
SPACEMASTER	SPACEMASTER	12'-1988>	Good
SPARTON	SPARTON	12'-1978<, 14'-1977<	Low Cost
SPARTON	SPARTON	12'-1979-1987, 14'-1978-1985	Average
SPARTON	SPARTON	12'-1988>, 14'-1986>	Good
STIEGLER	STIEGLER	12'-1983<, 14'-1982<	Low Cost
STIEGLER	STIEGLER	12'-1984>, 14'-1983>	Average
SUNRIZON	COLUMBIA	24'-1983<, 26'-1984<, 28'-1985<	Low Cost
SUNRIZON	COLUMBIA	24'-1984>, 26'-1985>, 28'-1986>	Average
SUNRIZON	REMINGTON	14'-1987<, 16'-1987<, 18'-1988<	Low Cost
SUNRIZON	REMINGTON	14'-1988>, 16'-1988>	Average
SUNRIZON	SEVILLE	24'-1983<, 26'-1984<, 28'-1985<	Low Cost
SUNRIZON	SEVILLE	24'-1984>, 26'-1985>, 28'-1986>	Average
TAYLOR	BUCKINGHAM	14'-1982<	Low Cost
TAYLOR	BUCKINGHAM	14'-1983>	Average
TAYLOR	WEDGEWOOD	14'-1982<	Low Cost
TAYLOR	WEDGEWOOD	14'-1983>	Average
TOWN&COUNTRY	TOWN & COUNTRY	12'-1982<, 14'-1977<, 16'-1984<	Low Cost
TOWN&COUNTRY	TOWN & COUNTRY	12'-1983-1987, 14'-1978-1985, 16'-1985>	Average
TOWN&COUNTRY	TOWN & COUNTRY	12'-1988>, 14'-1986>	Good
TOWNEHOUSE	TOWNEHOUSE	12'&14'&24'-1978<	Low Cost
TOWNEHOUSE	TOWNEHOUSE	12'-1979-1986, 14'-1979-1987,	Average
TOWNEHOUSE	TOWNEHOUSE	24'-1979-1987	Average
TOWNEHOUSE	TOWNEHOUSE	12'-1987>, 14'&24'-1988>	Good
TRAVEL	TRAVEL	12'-1973<, 14'-1976<, 24'-1976<	Low Cost
TRAVEL	TRAVEL	12'-1974-1983, 14'-1977-85, 24'-1977-87	Average
TRAVEL	TRAVEL	12'-1984>, 14'-1986>, 24'-1988>	Good

PART 4: REPLACEMENT COST

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
UNITED	UNITED	12'-1986<, 14'-1982<,	Low Cost
UNITED	UNITED	12'-1987>, 14'-1983>, 24'-1984<	Average
UNITED	UNITED	24'-1985>	Good
UTAH	BRENTWOOD	14'-1982<, 24'-1978<	Low Cost
UTAH	BRENTWOOD	14'-1983>, 24'-1979-1987	Average
UTAH	BRENTWOOD	24'-1988>	Good
UTAH	COLUMBIA	14'-1978<	Low Cost
UTAH	COLUMBIA	14'-1979-1987, 28'-1983<	Average
UTAH	COLUMBIA	14'-1988>, 28'-1984-1987	Good
UTAH	COLUMBIA	28'-1988>	Excellent
UTAH	LEISURE HOME	14'-1983<, 24'-1977<	Low Cost
UTAH	LEISURE HOME	14'-1984>, 24'-1978-1986	Average
UTAH	LEISURE HOME	24'-1987>	Good
UTAH	UTAH	12'-1979<, 20'-1978<, 24'-1978<	Low Cost
UTAH	UTAH	28'-1978<	Low Cost
UTAH	UTAH	12'-1980-1987, 20'-1979-1987,	Average
UTAH	UTAH	24'-1979-1987, 28'-1979-1987	Average
UTAH	UTAH	12'&14'&20'&24'&28	Good
VICTORIA	VICTORIA	12'-1979<, 14'-1978<	Low Cost
VICTORIA	VICTORIA	12'-1980>, 14'-1979-1987	Average
VICTORIA	VICTORIA	14'-1988>	Good
VIKING-EDGEW-	BRENTWOOD	24'-1977<	Low Cost
VIKING-EDGEW-	BRENTWOOD	24'-1978-1987	Average
VIKING-EDGEW-	BRENTWOOD	24'-1988>	Good
VIKING-EDGEW-	EDGEWOOD	24'-1978<	Average
VIKING-EDGEW-	EDGEWOOD	24'-1979-1983	Good
VIKING-EDGEW-	EDGEWOOD	24'-1985>	Excellent
VIKING-EDGEW-	GOLD SEAL	24'-1976<	Average
VIKING-EDGEW-	GOLD SEAL	24'-1977-1983	Good
VIKING-EDGEW-	GOLD SEAL	24'-1984>	Excellent
VIKING-EDGEW-	IMPERIAL	24'-1976<	Average
VIKING-EDGEW-	IMPERIAL	24'-1977-1983	Good
VIKING-EDGEW-	IMPERIAL	24'-1984>	Excellent
VOGUE	VOGUE	14'-1984<, 24'-1982<	Low Cost
VOGUE	VOGUE	14'-1985>, 24'-1983>	Average
WESTWAY	WESTWAY	24'-1982<	Average
WESTWAY	WESTWAY	24'-1983-1986	Good
WESTWAY	WESTWAY	24'-1987>	Excellent
WESTWAY	WESTWOOD	24'-1980<, 28'-1982<	Average
WESTWAY	WESTWOOD	24'-1981-1985, 28'-1983-1986	Good
WESTWAY	WESTWOOD	24'-1986>, 28'-1987>	Excellent
WESTWOOD	WESTWOOD	14'-1988<	Low Cost
WICK BUILDING	AQUARIUS	14'-1984<	Low Cost
WICK BUILDING	AQUARIUS	14'-1985>	Average
WICK BUILDING	ARTCRAFT	14'-1984<	Low Cost
WICK BUILDING	ARTCRAFT	14'-1985>	Average
WICK BUILDING	CORONADO	28'-1985<	Average
WICK BUILDING	CORONADO	28'-1986>	Good
WICK BUILDING	GRANDVILLE	14'-1984<	Low Cost
WICK BUILDING	GRANDVILLE	14'-1985>	Average
WICK BUILDING	MARSHFIELD	14'-1981<	Low Cost
WICK BUILDING	MARSHFIELD	14'-1982>	Average
WICK BUILDING	PINEBROOK	28'-1985<	Average
WICK BUILDING	PINEBROOK	28'-1986>	Good
WICK BUILDING	WICKCRAFT	14'-1984<	Low Cost
WICK BUILDING	WICKCRAFT	14'-1985>	Average
WICKES HOMES	DEERFIELD	14'-1982<	Low Cost
WICKES HOMES	DEERFIELD	14'-1983>	Average
WICKES HOMES	FASHION MANOR	12'-1985<, 14'-1982<, 24'-1975<	Low Cost
WICKES HOMES	FASHION MANOR	12'-1986>, 14'-1983>, 24'-1976-1986	Average
WICKES HOMES	FASHION MANOR	24'-1987>	Good
WICKES HOMES	RITZCRAFT	12'-1985<, 14'-1982<, 24'-1975<	Low Cost
WICKES HOMES	RITZCRAFT	12'-1986>, 14'-1983>, 24'-1976-1986	Average
WICKES HOMES	RITZCRAFT	24'-1987>	Good
WICKES HOMES	STYLECRAFT	12'-1985<, 14'-1983<	Low Cost
WICKES HOMES	STYLECRAFT	12'-1986>, 14'-1984>	Average

43. MOBILE HOMES

MANUFACTURER	MODEL NAME	WIDTH - YEAR CONSTRUCTION	QUALITY
WICKES HOMES	WICKES	12'-1985<, 14'-1983<, 24'-1979<	Low Cost
WICKES HOMES	WICKES	12'-1986>, 14'-1984>, 24'-1980>	Average
WINDSOR	WINDSOR	14'-1977<	Low Cost
WINDSOR	WINDSOR	14'-1978-1985	Average
WINDSOR	WINDSOR	14'-1986>	Good
WINSTON	BROUGHAM	14	Low Cost
WINSTON	BROUGHAM	14'&24'-1978-1987, 28'-1981>	Average
WINSTON	BROUGHAM	14'&24'-1988>	Good
WINSTON	COUNTRY ROAD	14	Low Cost
WINSTON	COUNTRY ROAD	14'&24'-1978-1987, 28'-1981>	Average
WINSTON	COUNTRY ROAD	14'&24'-1988>	Good
WINSTON	FOUR SEASONS	14'-1981<, 24'-1978<, 28'-1980<	Low Cost
WINSTON	FOUR SEASONS	14'-1982>, 24'-1979-1987, 28'-1981>	Average
WINSTON	FOUR SEASONS	24'-1988>	Good
WINSTON	SUNDANCER	12'-1983<, 14'-1982<	Low Cost
WINSTON	SUNDANCER	12'-1984>, 14'-1983>	Average
WOODLAND	WOODLAND	12'-1983<, 14'-1984<, 20'-1985<	Low Cost
WOODLAND	WOODLAND	24'-1979<	Low Cost
WOODLAND	WOODLAND	12'-1984>, 14'-1985>, 20'-1986>	Average
WOODLAND	WOODLAND	24'-1980>	Average
ZIMMER	CASTLEWOOD	28'-1981<	Low Cost
ZIMMER	CASTLEWOOD	28'-1982>	Average
ZIMMER	NASHUA	14'-1982<, 24'-1980<	Low Cost
ZIMMER	NASHUA	14'-1983>, 24'-1981>	Average
ZIMMER	PRINCESS	14'-1982<, 24'-1980<	Low Cost
ZIMMER	PRINCESS	14'-1983>, 24'-1981>	Average
ZIMMER	WINDSOR	14'-1975>	Low Cost
ZIMMER	WINDSOR	14'-1976-1987	Average
ZIMMER	ZIMMER	12'-1985<	Low Cost
ZIMMER	ZIMMER	12'-1986>	Average

PART 4: REPLACEMENT COST

43.3.2. MODEL NAME ORDER

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
ACADEMY	SKYLINE	12'&24'-1982<, 14'-1986<, 20'-1978<	Low Cost
ACADEMY	SKYLINE	12'&24'-1983>, 14'-1987>, 20'-1979-1986	Average
ACADEMY	SKYLINE	20'-1987>	Good
ACCENT	FLEETWOOD	12', 14'-1973<, 12', 14'-1983<	Low Cost
ACCENT	FLEETWOOD	12', 14'-1984>	Average
ADRIAN	SHAR LO HOMES	12'-1988>	Average
ADRIAN	SHAR LO HOMES	12'-1987<	Low Cost
AIRLINER	GUERDON	12'-1977<	Low Cost
AIRLINER	GUERDON	12'-1978-84	Average
AIRLINER	GUERDON	12'-1985>	Good
ALL SEASONS	ALSEACO	12'-1982<, 14'-1981<	Low Cost
ALL SEASONS	ALSEACO	12'-1983>, 14'-1982>	Average
ALPINE CENTURIAN	CENTURY	14'&16'-1975<	Low Cost
ALPINE CENTURIAN	CENTURY	14'&16'-1976-1982, 24'&26'-1981<	Average
ALPINE CENTURIAN	CENTURY	14'&16'-1983-1985	Good
ALPINE CENTURIAN	CENTURY	24'&26'-1982-1985	Good
ALPINE CENTURIAN	CENTURY	ALL SIZES 1986>	Excellent
ALPINE CENTURY	CENTURY	12'&16'-1976<, 14'-1978<	Low Cost
ALPINE CENTURY	CENTURY	12'&16'-1977-1983, 14'-1979-1985	Average
ALPINE CENTURY	CENTURY	24'-1982<	Average
ALPINE CENTURY	CENTURY	12'&16'-1984>, 14'-1986>	Good
ALPINE CENTURY	CENTURY	24'-1983-1985	Good
ALPINE CENTURY	CENTURY	24'-1986>	Excellent
ALPINE LEADER	CENTURY	14'-1975<	Low Cost
ALPINE LEADER	CENTURY	14'-1976-1982	Average
ALPINE LEADER	CENTURY	14'-1983>	Good
ALPINE MARK II	CENTURY	14'-1980<, 16'-1981<, 24'-1978<	Average
ALPINE MARK II	CENTURY	14'-1981-1985, 16'-1982-1985	Good
ALPINE MARK II	CENTURY	24'-1979-1984	Good
ALPINE MARK II	CENTURY	14'&16'-1986>, 24'-1985>	Excellent
ALPINE PRESTIGE	CENTURY	16'-1973<	Low Cost
ALPINE PRESTIGE	CENTURY	14'-1980<, 16'-1974-1980	Average
ALPINE PRESTIGE	CENTURY	24'&28'-1977<	Average
ALPINE PRESTIGE	CENTURY	14'&16'-1981-1984,	Good
ALPINE PRESTIGE	CENTURY	24'&28'-1978-1982	Good
ALPINE PRESTIGE	CENTURY	14'&16'-1985>, 24'&28'-1983>	Excellent
AMBASSADOR	SCHULT	12'-1986<, 14'-1987<, 24'-1979<	Low Cost
AMBASSADOR	SCHULT	14'-1987>, 16'-1988>, 24'-1980-1987	Average
AMBASSADOR	SCHULT	24'-1988>	Good
AMERICAN WAY	AMERICAN WAY	12'&14'-1986<	Low Cost
AMERICAN WAY	AMERICAN WAY	12'&14'-1987>	Average
APACHE	APACHE	12'-1981<	Low Cost
APACHE	APACHE	12'-1982>	Average
AQUARIUS	NATIONAL	12'&14'-1987<	Low Cost
AQUARIUS	NATIONAL	12'&14'-1988>	Average
AQUARIUS	WICK BUILDING	14'-1984<	Low Cost
AQUARIUS	WICK BUILDING	14'-1985>	Average
ARDMORE	MODULINE	14'-1982<, 28'-1981<	Low Cost
ARDMORE	MODULINE	14'-1983>, 24'-1987<, 28'-1982>	Average
ARDMORE	MODULINE	24'-1988>	Good
ARGUS	ARGUS	14'-1983<	Low Cost
ARGUS	ARGUS	14'-1984>	Average
ARMOR	GUERDON	12'-1977<	Low Cost
ARMOR	GUERDON	12'-1978-84	Average
ARMOR	GUERDON	12'-1985>	Good
ARTCRAFT	ARTCRAFT	12'-1981<, 14'-1983<, 24'-1984<	Low Cost
ARTCRAFT	ARTCRAFT	12'-1982>, 14'-1984>, 24'-1985>	Average
ARTCRAFT	WICK BUILDING	14'-1984<	Low Cost
ARTCRAFT	WICK BUILDING	14'-1985>	Average

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
ARTIC MANOR	ATCO	14'-1979<	Low Cost
ARTIC MANOR	ATCO	14'-1980>	Average
ASTRA	GUERDON	10'-1981<, 12'-1982<, 14'-1984<	Low Cost
ASTRA	GUERDON	10'-1982>, 12'-1983>, 14'-1985>	Average
ASTRO	ASTRO	14'-1976<	Low Cost
ASTRO	ASTRO	14'-1977>	Average
ASTRO	ASTRO	14'-1987>	Good
ATCO	ATCO	14'-1976<	Low Cost
ATCO	ATCO	14'-1977-1984	Average
ATCO	ATCO	14'-1985>	Good
ATLANTIC	CHAMPION	ALL SIZES 1981<	Low Cost
ATLANTIC	CHAMPION	ALL SIZES 1982>	Average
ATLAS	GUERDON	12', 24' & 28'-1978<, 14'-1981<	Low Cost
ATLAS	GUERDON	12', 24' & 28'-1978-85, 14'-1982>	Average
ATLAS	GUERDON	12', 24' & 28'-1986>	Good
AZTEC	AZTEC	12'-1981<, 14'-1979<, 24'-1978<	Low Cost
AZTEC	AZTEC	12'-1982>, 14'-1980>, 24'-1979>	Average
BAINBRIDGE	KAUFMAN/BROAD	12' & 14'-1981<, 20'-1979<, 24'-1983<	Low Cost
BAINBRIDGE	KAUFMAN/BROAD	12' & 14'-1982>, 20'-1980>, 24'-1984>	Average
BARRINGTON	FLEETWOOD	12'-1976<, 14'-1978<, 24' & 28' 1981<	Low Cost
BARRINGTON	FLEETWOOD	12'-1977-1985, 14'-1979>, 26'-1985<	Average
BARRINGTON	FLEETWOOD	24' & 28' 1982>	Average
BARRINGTON	FLEETWOOD	12', 26'-1986>	Good
BAYCREST	GUERDON	14'-1984<	Low Cost
BAYCREST	GUERDON	14'-1985>	Average
BAYWOOD	KAUFMAN/BROAD	28'-1980<, 24'-1986<, 28'-1981-87	Low Cost
BAYWOOD	KAUFMAN/BROAD	24'-1987>, 28'-1988>	Average
BAYWOOD	KAUFMAN/BROAD	24'-1987>, 28'-1988>	Good
BEDFORD	MODULINE	14'-1982<, 28'-1981<	Low Cost
BEDFORD	MODULINE	14'-1983>, 24'-1987<, 28'-1982>	Average
BEDFORD	MODULINE	24'-1988>	Good
BELAIRE	FUQUA	12' & 14'-1981<, 20'-1981<, 24'-1977<	Low Cost
BELAIRE	FUQUA	12' & 14'-1982-1985, 20'-1982>	Average
BELAIRE	FUQUA	24'-1978-1984	Average
BELAIRE	FUQUA	12' & 14'-1986>, 24', 26' & 28'-1985>	Good
BELLAVISTA	CHIEF IND	12', 14' & 24'-1982<, 16'-1979<	Low Cost
BELLAVISTA	CHIEF IND	12', 14' & 24'-1983>, 16'-1980>	Average
BELLAVISTA	CHIEF IND	28'-1985<	Average
BELLAVISTA	CHIEF IND	24' & 28'-1986>	Good
BELMONT	ANCHOR	12'-1986<, 14'-1984<, 24'-1978<	Low Cost
BELMONT	ANCHOR	12'-1987>, 14'-1985>, 24'-1979>	Average
BENDIX	BENDIX	12'-1986<, 14'-1979<, 20'-1978<	Low Cost
BENDIX	BENDIX	24'-1981<	Low Cost
BENDIX	BENDIX	12'-1987>, 14'-1980>, 20'-1979>	Average
BENDIX	BENDIX	24'-1982>	Average
BIG SKY	BIG SKY	14'-1981<, 16'-1978<, 28'-1975<	Low Cost
BIG SKY	BIG SKY	14'-1982>, 16'-1979>, 28'-1976>	Average
BILTMORE	KAUFMAN/BROAD	12', 14' & 28'-1981<, 24'-1979<	Low Cost
BILTMORE	KAUFMAN/BROAD	12', 14' & 28'-1982>, 24'-1980>	Average
BLAIRHOUSE	CHICKASHA	ALL SIZES 1982>	Average
BLAIRHOUSE	CHICKASHA	ALL SIZES 1981<	Low Cost
BOISE-CASCADE	BENDIX-BOISE	12'-1986<, 14'-1979<, 24'-1983<	Low Cost
BOISE-CASCADE	BENDIX-BOISE	12'-1987>, 14'-1980>, 24'-1984>	Average
BON PRIX	ALLEN	12'-1984<, 14'-1983<, 24'-1977<	Low Cost
BON PRIX	ALLEN	12'-1985>, 14'-1984>, 24'-1978>	Average
BONNAVILLA	CHIEF IND	12', 14' & 24'-1981<, 16'-1974<	Low Cost
BONNAVILLA	CHIEF IND	28'-1978<	Low Cost
BONNAVILLA	CHIEF IND	12' & 24'-1982-1985, 14'-1982>	Average
BONNAVILLA	CHIEF IND	16'-1975-1985, 28'-1979-1984	Average
BONNAVILLA	CHIEF IND	12', 16' & 24'-1986>, 28'-1985>	Good
BRENTVILLA	ARTCRAFT	14'-1985<	Low Cost
BRENTVILLA	ARTCRAFT	14'-1986>	Average
BRENTWOOD	BRENTWOOD	12'-1985<, 14'-1986<, 24'-1981<	Low Cost
BRENTWOOD	BRENTWOOD	12'-1986>, 14'-1987>, 24'-1982>	Average
BRENTWOOD	UTAH	14'-1982<, 24'-1978<	Low Cost

PART 4: REPLACEMENT COST

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
BRENTWOOD	UTAH	14'-1983>, 24'-1979-1987	Average
BRENTWOOD	UTAH	24'-1988>	Good
BRENTWOOD	VIKING-EDGEW-	24'-1977<	Low Cost
BRENTWOOD	VIKING-EDGEW-	24'-1978-1987	Average
BRENTWOOD	VIKING-EDGEW-	24'-1988>	Good
BRIGHTON	REDMAN	12'-1987<, 14'-1984<, 24'-1980<,	Low Cost
BRIGHTON	REDMAN	28'-1983<	Low Cost
BRIGHTON	REDMAN	12'-1988>, 14'-1985>, 24'-1981>	Average
BRIGHTON	REDMAN	28'-1984>	Average
BROADMORE	FLEETWOOD	12'-1985<, 14'-1984<, 24'-1977<	Low Cost
BROADMORE	FLEETWOOD	12'-1986>, 14'-1985>, 24'-1978>,	Average
BROADMORE	FLEETWOOD	28'-1977-1985	Average
BROADMORE	FLEETWOOD	28'-1986>	Good
BROOKDALE	SHELTEREX	12'&14'-1979<, 24'-1978<	Low Cost
BROOKDALE	SHELTEREX	12'-1980-1987, 14'-1980>, 24'-1979-1987	Average
BROOKDALE	SHELTEREX	12'-1988>, 24'-1988>	Good
BROOKFIELD	FLEETWOOD	24'-1983<, 28'-1984<	Low Cost
BROOKFIELD	FLEETWOOD	24'-1983>, 28'-1984>	Average
BROOKWOOD	BENDIX-BOISE	12'&24'-1982<,14'-1978<,20'-1981<	Low Cost
BROOKWOOD	BENDIX-BOISE	12'&24'-1983>,14'-1979>,20'-1982>	Average
BROOKWOOD	COMMODORE	20'-1980<	Low Cost
BROOKWOOD	COMMODORE	20'-1981>, 24'-1984<	Average
BROOKWOOD	COMMODORE	24'-1985>	Good
BROOKWOOD	FLEETWOOD	24'-1983<, 28'-1984<	Low Cost
BROOKWOOD	FLEETWOOD	24'-1983>, 28'-1984>	Average
BROUGHAM	WINSTON	14	Low Cost
BROUGHAM	WINSTON	14'&24'-1978-1987, 28'-1981>	Average
BROUGHAM	WINSTON	14'&24'-1988>	Good
BUCKINGHAM	TAYLOR	14'-1982<	Low Cost
BUCKINGHAM	TAYLOR	14'-1983>	Average
BUDDY	SKYLINE	12'-1983<, 14'-1982<, 20'&24'-1980	Low Cost
BUDDY	SKYLINE	28'-1979<	Low Cost
BUDDY	SKYLINE	12'-1984>, 14'-1983>, 20'&24'-1981>	Average
BUDDY	SKYLINE	28'-1980>	Average
CALYPSO	GOLDEN WEST	12'-1982<, 24'-1976<	Low Cost
CALYPSO	GOLDEN WEST	12'-1982>, 24'-1977-1985	Average
CALYPSO	GOLDEN WEST	24'-1986>	Good
CAMELOT	CENTRAL	14'&16' -1984<, 24'&26'-1981<,	Low Cost
CAMELOT	CENTRAL	28'-1977<,	Low Cost
CAMELOT	CENTRAL	14'&16'-1985>, 24'&26'-1982>,	Average
CAMELOT	CENTRAL	28'-1978-1986	Average
CAMELOT	CENTRAL	28'-1987>	Good
CAMELOT	GUERDON	12'-ALL YEARS, 24'-1978<	Low Cost
CAMELOT	GUERDON	24'-1979>	Average
CAMERON	SKYLINE	12'-1987<, 14'-1985<, 20'-1982<	Low Cost
CAMERON	SKYLINE	24'-1979<	Low Cost
CAMERON	SKYLINE	12'-1988>, 14'-1986>, 20'-1983>	Average
CAMERON	SKYLINE	24'-1980>	Average
CANDLEWOOD	MODULINE	14'-1982<, 28'-1981<	Low Cost
CANDLEWOOD	MODULINE	14'-1983>, 24'-1987<, 28'-1982>	Average
CANDLEWOOD	MODULINE	24'-1988>	Good
CANYON CREST	KAUFMAN/BROAD	12',14'&28'-1981<, 24'-1979<	Low Cost
CANYON CREST	KAUFMAN/BROAD	12',14'&28'-1982>, 24'-1980>	Average
CANYON CREST	MODULINE	12'-1982<, 14'-1983<, 28'-1982<	Low Cost
CANYON CREST	MODULINE	12'-1983>, 14'-1984>, 24'-1987<	Average
CANYON CREST	MODULINE	28'-1983>	Average
CANYON CREST	MODULINE	24'-1988>	Good
CAREFREE	FUQUA	14'-1980<, 24'-1973<	Low Cost
CAREFREE	FUQUA	14'-1981>, 24'-1974-1985	Average
CAREFREE	FUQUA	26'&28'-1984<	Average
CAREFREE	FUQUA	26'&28'-1985>, 24'-1986>	Good
CAREFREE	MELODY HOMES	12'-1981<, 14'-1982<	Low Cost
CAREFREE	MELODY HOMES	12'-1982>, 14'-1983>	Average
CARMEL	CENTURY	12'-1981<, 14'&20'-1978<	Low Cost
CARMEL	CENTURY	24'&28'-1975<	Low Cost

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
CARMEL	CENTURY	12'-1982>, 14'&20'-1979-1985	Average
CARMEL	CENTURY	24'&28'-1976-1983	Average
CARMEL	CENTURY	14'&20'-1986>, 24'&28'-1984>	Good
CARRIAGE HOUSE	HOUSE/HARMONY	14'-1974<, 24'-1973<	Low Cost
CARRIAGE HOUSE	HOUSE/HARMONY	14'-1975-81, 24'-1974-81, 28'-1981<	Average
CARRIAGE HOUSE	HOUSE/HARMONY	14'-1982>, 24'-1982-85, 28'-1982-84	Good
CARRIAGE HOUSE	HOUSE/HARMONY	24'-1986>, 28'-1985>	Excellent
CASCADE	FUQUA	16'-1981<,	Low Cost
CASCADE	FUQUA	16'-1982-85, 24'-1983<, 26'-1983<	Average
CASCADE	FUQUA	16'-1986>, 24'-1984-85, 26'-1984>	Good
CASCADE	FUQUA	24'-1986>	Excellent
CASTLEWOOD	ZIMMER	28'-1981<	Low Cost
CASTLEWOOD	ZIMMER	28'-1982>	Average
CEDARBROOK	FUQUA	24'-1981<, 28'-1982<	Average
CEDARBROOK	FUQUA	24'-1982-85, 28'-1983-85	Good
CEDARBROOK	FUQUA	24'&28'-1986>	Excellent
CENTENNIAL	CENTRAL	14'-1978<, 16'-1977<, 24'-1974<	Low Cost
CENTENNIAL	CENTRAL	14'-1979>, 16'-1978-1984,	Average
CENTENNIAL	CENTRAL	24'-1975>	Average
CENTENNIAL	CENTRAL	16'-1985>,	Good
CENTRAL	CENTRAL	12'-1978<, 14'-1981<, 16'-1982<,	Low Cost
CENTRAL	CENTRAL	24'-1977<,	Low Cost
CENTRAL	CENTRAL	12'-1979-1986, 14'-1982>, 16'-1983>	Average
CENTRAL	CENTRAL	24'-1977-1986, 28'-1984<	Average
CENTRAL	CENTRAL	12'&24'-1987>, 28'-1983-1986	Good
CENTRAL	CENTRAL	28'-1987>	Excellent
CENTURY	CENTURY	12', 24'&28'-1973<, 14'-1978<	Low Cost
CENTURY	CENTURY	16'-1976<	Low Cost
CENTURY	CENTURY	12', 24'&28'-1974-1982	Average
CENTURY	CENTURY	14'-1979-1985, 16'-1977-1983	Average
CENTURY	CENTURY	12', 24'&28'-1983>, 14'-1986>,	Good
CENTURY	CENTURY	16'-1984>	Good
CHADWICK	FLEETWOOD	24'&28'-1984<	Low Cost
CHADWICK	FLEETWOOD	24'&28'-1985>	Average
CHALLENGER	FUQUA	12'&14'-1977<	Low Cost
CHALLENGER	FUQUA	12'&14'-1978-84	Average
CHALLENGER	FUQUA	12'&14'-1985>	Good
CHALLENGER	SCHULT	14'-1982<	Low Cost
CHALLENGER	SCHULT	14'-1983>	Average
CHAPARREL	FUQUA	12'&14'-1977<	Low Cost
CHAPARREL	FUQUA	12'&14'-1978-84	Average
CHAPARREL	FUQUA	12'&14'-1985>	Good
CHATEAU	GALLATIN	ALL SIZES 1979<,	Low Cost
CHATEAU	GALLATIN	ALL SIZES 1980>	Average
CHATEAU	SCHULT	14'-1984<, 16'-1983<	Low Cost
CHATEAU	SCHULT	14'-1985>, 16'-1984>	Average
CHICKASHA	CHICKASHA	12'&14'-1983<, 16'-1978<, 24'-1976<	Low Cost
CHICKASHA	CHICKASHA	12'&14'-1984>, 16'-1979>	Average
CHICKASHA	CHICKASHA	24'-1977-1985	Average
CHICKASHA	CHICKASHA	24'-1986>	Good
CIMMARRON	GALLATIN	14'-1981<, 16'&28'-1979<	Low Cost
CIMMARRON	GALLATIN	14'-1982>, 16'&18'-1980>	Average
CITATION	COMMODORE	12'-1980<, 14'-1981<, 24'-1979<	Low Cost
CITATION	COMMODORE	28'-1981<	Low Cost
CITATION	COMMODORE	12'-1981>, 14'-1982>, 24'-1980>	Average
CITATION	COMMODORE	28'-1982>	Average
CITATION	SCHULT	14'-1979<, 16'-1985<	Low Cost
CITATION	SCHULT	14'-1980-1986, 16'-1986>	Average
CITATION	SCHULT	14'-1987>	Good
CLASSIC	CENTURY	ALL SIZES 1982<	Average
CLASSIC	CENTURY	ALL SIZES 1983>	Good
CLASSIC	CENTURY	14'-1986>	Excellent
CLASSIC	COMMODORE	14'-1985<, 20'-1980<, 24'-1981<	Low Cost
CLASSIC	COMMODORE	28'-1984<	Low Cost
CLASSIC	COMMODORE	14'-1986>, 20'-1981>, 24'-1982>	Average

PART 4: REPLACEMENT COST

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
CLASSIC	COMMODORE	28'-1985>	Average
COLUMBIA	SUNRIZON	24'-1983<, 26'-1984<, 28'-1985<	Low Cost
COLUMBIA	SUNRIZON	24'-1984>, 26'-1985>, 28'-1986>	Average
COLUMBIA	UTAH	14'-1978<	Low Cost
COLUMBIA	UTAH	14'-1979-1987, 28'-1983<	Average
COLUMBIA	UTAH	14'-1988>, 28'-1984-1987	Good
COLUMBIA	UTAH	28'-1988>	Excellent
COLUMBINE	CENTRAL	12'&14'&28'-1977<, 24'-1974<	Low Cost
COLUMBINE	CENTRAL	12'&14'&28'-1979-1986,	Average
COLUMBINE	CENTRAL	24'-1975-1984	Average
COLUMBINE	CENTRAL	12'&14'&28'-1987>, 24'-1985>	Good
COMET	COMMODORE	14'-1985<, 24'&28'-1981<	Low Cost
COMET	COMMODORE	14'-1986>, 24'&28'-1982>	Average
COMMANDER	COMMODORE	14'-1983<, 24'-1979<, 28'-1981<	Low Cost
COMMANDER	COMMODORE	14'-1984>, 24'-1980>, 28'-1982>	Average
COMMANDER	SKYLINE	12'&14'-1983<	Low Cost
COMMANDER	SKYLINE	12'&14'-1984>	Average
CONCHEMCO	CONCHEMCO	12'-1985<, 14'-1981<, 24'-1978<	Low Cost
CONCHEMCO	CONCHEMCO	28'-1976<	Low Cost
CONCHEMCO	CONCHEMCO	12'-1986>, 14'-1982>, 24'-1979>	Average
CONCHEMCO	CONCHEMCO	28'-1977-1985	Average
CONCHEMCO	CONCHEMCO	28'-1986>	Good
CONCORD	CHAMPION	12'&24'-1981<, 14'-1984<	Low Cost
CONCORD	CHAMPION	12'&24'-1982>, 14'-1985>	Average
CORINTHIAN	MODULINE	12'-1982<, 14'-1983<, 28'-1982<	Low Cost
CORINTHIAN	MODULINE	12'-1983>, 14'-1984>, 24'-1987<	Average
CORINTHIAN	MODULINE	28'-1983>	Average
CORINTHIAN	MODULINE	24'-1988>	Good
CORONADO	WICK BUILDING	28'-1985<	Average
CORONADO	WICK BUILDING	28'-1986>	Good
COUNTRY ROAD	WINSTON	14	Low Cost
COUNTRY ROAD	WINSTON	14'&24'-1978-1987, 28'-1981>	Average
COUNTRY ROAD	WINSTON	14'&24'-1988>	Good
COUNTY SQUIRE	KIT	12'-1978<, 14'-1981<	Low Cost
COUNTY SQUIRE	KIT	12'-1979-85, 14'-1982>	Average
COUNTY SQUIRE	KIT	12'-1986>	Good
CRAFTMADE	CONTINENTAL	14'-1974<, 16'-1975<, 28'-1974<	Low Cost
CRAFTMADE	CONTINENTAL	14'-1975-1981, 16'-1976-1982	Average
CRAFTMADE	CONTINENTAL	28'-1975-1983	Average
CRAFTMADE	CONTINENTAL	14'-1982-1985, 16'-1983>	Good
CRAFTMADE	CONTINENTAL	28'-1984>	Good
CRAFTMADE	CONTINENTAL	14'-1986>	Excellent
CRAFTMARK	CONTINENTAL	14'-1975<, 16', 24'&28'-1975<	Low Cost
CRAFTMARK	CONTINENTAL	14'-1976-1983	Average
CRAFTMARK	CONTINENTAL	16', 24'&28	Average
CRAFTMARK	CONTINENTAL	14'-1984>, 16, 24'&28'-1985>	Good
CRANBROOK	GUERDON	14'&24'-1982<	Low Cost
CRANBROOK	GUERDON	14'&24'-1983>	Average
CREST	CHICKASHA	12'&14'-1983<, 16'-1978<, 24'-1976<	Low Cost
CREST	CHICKASHA	12'&14'-1984>, 16'-1979>	Average
CREST	CHICKASHA	24'-1977-1985	Average
CREST	CHICKASHA	24'-1986>	Good
CROWNPOINTE	FLEETWOOD	12'-1976<, 14'-1978<, 24'&28'1981<	Low Cost
CROWNPOINTE	FLEETWOOD	12'-1977-1985, 14'-1979>, 26'-1985<	Average
CROWNPOINTE	FLEETWOOD	24'&28'1982>	Average
CROWNPOINTE	FLEETWOOD	12', 26'-1986>	Good
CUSTOM	SCHULT	12'-1978<, 14'-1980<, 16'-1982<	Low Cost
CUSTOM	SCHULT	12'-1979-1984, 14'-1981>, 16'-1983>	Average
CUSTOM	SCHULT	12'-1985>	Good
CUSTOM	SKYLINE	14'-1981<, 24'-1979<	Low Cost
CUSTOM	SKYLINE	12'-1982>, 24'-1980>	Average
DARTMOUTH	MODULINE	14'-1982<, 28'-1981<	Low Cost
DARTMOUTH	MODULINE	14'-1983>, 24'-1987<, 28'-1982>	Average
DARTMOUTH	MODULINE	24'-1988>	Good
DEERFIELD	SKYLINE	12'&14'-1983<	Low Cost

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
DEERFIELD	SKYLINE	12'&14'-1984>	Average
DEERFIELD	WICKES HOMES	14'-1982<	Low Cost
DEERFIELD	WICKES HOMES	14'-1983>	Average
DELUXE	CHAMPION	14'-1981<	Low Cost
DELUXE	CHAMPION	14'-1982>	Average
DETROITER	DMH	12'-1981<, 14'-1981<, 24'-1977<	Low Cost
DETROITER	DMH	12'-1982>, 14'-1982>, 24'-1978>	Average
EATON PARK	REDMAN	12'-1985<, 14'-1986<, 24'-1979<	Low Cost
EATON PARK	REDMAN	12'-1986>, 14'-1987>, 24'-1980>	Average
EDGEWOOD	VIKING-EDGEW-	24'-1978<	Average
EDGEWOOD	VIKING-EDGEW-	24'-1979-1983	Good
EDGEWOOD	VIKING-EDGEW-	24'-1985>	Excellent
ELCAR	COMMODORE	24'-1980<, 28'-1982<	Average
ELCAR	COMMODORE	24'-1981-1985, 28'-1983>	Good
ELCAR	COMMODORE	24'-1986>	Excellent
ELKHART	ELKHART	12', 14'-1973<	Low Cost
ELKHART	ELKHART	12', 14'-1974-1982	Average
ELKHART	ELKHART	12', 14'-1983>	Good
EMBASSY	GUERDON	12'-1984<, 14'-1977<	Low Cost
EMBASSY	GUERDON	12'-1985>, 14'-1978-85	Average
EMBASSY	GUERDON	14'-1986>	Good
ESQUIRE	GUERDON	14'-1984<	Low Cost
ESQUIRE	GUERDON	14'-1985>	Average
FAIRVIEW	KIT	12'-1978<, 14'-1981<	Low Cost
FAIRVIEW	KIT	12'-1979-85, 14'-1982>	Average
FAIRVIEW	KIT	12'-1986>	Good
FALCON	FALCON COACH	14'-1978<, 24'-1977<	Low Cost
FALCON	FALCON COACH	14'-1979>, 24'-1978-85	Average
FALCON	FALCON COACH	24'-1986>	Good
FASHION MANOR	WICKES HOMES	12'-1985<, 14'-1982<, 24'-1975<	Low Cost
FASHION MANOR	WICKES HOMES	12'-1986>, 14'-1983>, 24'-1976-1986	Average
FASHION MANOR	WICKES HOMES	24'-1987>	Good
FLAMINGO	REDMAN	12'-1985<, 14'-1986<, 24'-1979<	Low Cost
FLAMINGO	REDMAN	12'-1986>, 14'-1987>, 24'-1980>	Average
FLEETWOOD	FLEETWOOD	12', 14'-ALL YEARS, 24'&28'-1978<	Low Cost
FLEETWOOD	FLEETWOOD	24'&28'-1979>	Average
FOUR SEASONS	ALLEN	12'&14'-1982<, 24'-1980<	Low Cost
FOUR SEASONS	ALLEN	12'&14'-1983>, 24'-1981>	Average
FOUR SEASONS	WINSTON	14'-1981<, 24'-1978<, 28'-1980<	Low Cost
FOUR SEASONS	WINSTON	14'-1982>, 24'-1979-1987, 28'-1981>	Average
FOUR SEASONS	WINSTON	24'-1988>	Good
FRONTIER	COMMODORE	12'-1985<, 14'-1983<, 24'-1981<	Low Cost
FRONTIER	COMMODORE	12'-1986>, 14'-1984>, 24'-1982>	Average
FUQUA	FUQUA	12'&14'-1979<, 24'-1977<	Low Cost
FUQUA	FUQUA	12'&14'-1980-85, 24'-1978-84	Average
FUQUA	FUQUA	12'&14'-1986>, 24'-1985>	Good
FUTURAMA	GUERDON	12'-1983<, 14'-1985<	Low Cost
FUTURAMA	GUERDON	12'-1984>, 14'-1986>	Average
GALAXY	COMMODORE	14'&28'-1983<, 24'-1981<	Low Cost
GALAXY	COMMODORE	14'&28'-1984>, 24'-1982>	Average
GALAXY	GALAXY	ALL SIZES/YEARS	Low Cost
GALLATIN	GALLATIN	14'-1979<, 16'-1981<	Low Cost
GALLATIN	GALLATIN	14'-1980>, 16'-1982>	Average
GEER	GEER	14'-1977<	Low Cost
GEER	GEER	14'-1978-85	Average
GEER	GEER	14'-1985>	Good
GENERAL	BENDIX-BOISE	12'&14'-1984<, 24'-1977<	Low Cost
GENERAL	BENDIX-BOISE	12'&14'	Average
GENTRY	ATCO	12'-1982<, 14'-1979<, 20'-1978<	Low Cost
GENTRY	ATCO	24'-1981<	Low Cost
GENTRY	ATCO	12'-1983>, 14'-1980>, 20'-1979>	Average
GENTRY	ATCO	24'-1982>	Average
GENTRY-CUSTOM	ATCO	24'-1978<	Low Cost
GENTRY-CUSTOM	ATCO	24'-1979>	Average
GIBRALTER	MODULINE	12'-1980<, 14'-1982<, 28'-1982<	Low Cost

PART 4: REPLACEMENT COST

MODEL NAME	MANUFACTURER	WIOITH - YEAR CONSTRUCTION	QUALITY
GIBRALTER	MODULINE	12'-1981-87, 14'&28'-1983>, 24'-1987<	Average
GIBRALTER	MODULINE	12'&24'-1988>	Good
GIBRALTOR	HARMONY	12'&14'-1984<	Low Cost
GIBRALTOR	HARMONY	12'&14'-1985>	Average
GLENBROOK	FLEETWOOD	12'-1985<, 14'-1984<, 24'-1981<	Low Cost
GLENBROOK	FLEETWOOD	28'-1979<	Low Cost
GLENBROOK	FLEETWOOD	12'-1986>, 14'-1985>, 24'-1982>	Average
GLENBROOK	FLEETWOOD	28'-1980>	Average
GLENWOOD	GLEN RIVER	14'-1985<, 26'-1981<	Average
GLENWOOD	GLEN RIVER	14'-1986>, 26'-1982>	Good
GOLD SEAL	VIKING-EDGEW-	24'-1976<	Average
GOLD SEAL	VIKING-EDGEW-	24'-1977-1983	Good
GOLD SEAL	VIKING-EDGEW-	24'-1984>	Excellent
GOLDEN STATE	KIT	14'-1975<, 28'-1973<	Low Cost
GOLDEN STATE	KIT	14'-1976-85, 24'-1984<, 28'-1974-85	Average
GOLDEN STATE	KIT	14'&28'-1986>, 24'-1985>	Good
GOVERNOR	CONCHEMCO	12'-1983<, 14'-1978<	Low Cost
GOVERNOR	CONCHEMCO	12'-1984>, 14'-1979>	Average
GRANDVILLE	WICK BUILDING	14'-1984<	Low Cost
GRANDVILLE	WICK BUILDING	14'-1985>	Average
GRANVILLE	REDMAN	12'-1987<, 14'-1985<	Low Cost
GRANVILLE	REDMAN	12'-1988>, 14'-1986>	Average
GREAT LAKES	GUERDON	12',14'&16'-1981<, 24'-1975<	Low Cost
GREAT LAKES	GUERDON	12',14'&16'-1982>, 24'-1976-1984	Average
GREAT LAKES	GUERDON	28'-1984<	Average
GREAT LAKES	GUERDON	24'&28'-1985>	Good
GREAT NORTHERN	CENTRAL	14'&16'-1981<,24'-1979<,26'-1976<	Low Cost
GREAT NORTHERN	CENTRAL	14'&16'-1982>, 24'-1980>,	Average
GREAT NORTHERN	CENTRAL	26'-1977-1986	Average
GREAT NORTHERN	CENTRAL	26'-1987>	Good
GUARDIAN	COMMODORE	14'-1985<, 20'-1980<, 24'-1981<	Low Cost
GUARDIAN	COMMODORE	28'-1984<	Low Cost
GUARDIAN	COMMODORE	14'-1986>, 20'-1981>, 24'-1982>	Average
GUARDIAN	COMMODORE	28'-1985>	Average
GUERDON	GUERDON	12'&14'-1983<, 20'-1978<, 28'-1977<	Low Cost
GUERDON	GUERDON	12'&14'-1984>, 20'-1979-85	Average
GUERDON	GUERDON	24'-1982<, 28'-1978-1984	Average
GUERDON	GUERDON	20'-1986>, 24'-1982-85, 28'-1985>	Good
GUERDON	GUERDON	24'-1986>	Excellent
GULFSTREAM	FUQUA	14'-1981<, 24'-1978<	Low Cost
GULFSTREAM	FUQUA	14'-1982>, 24'-1979-85	Average
GULFSTREAM	FUQUA	24'-1986>	Good
HACIENDA	GUERDON	12'-1983<, 14'&24'-1978<, 28'-1974<	Low Cost
HACIENDA	GUERDON	12'-1984>, 14'&24'-1979-85	Average
HACIENDA	GUERDON	28'-1975-1984	Average
HACIENDA	GUERDON	14'&24'-1986>, 28'-1985>	Good
HALLMARK	REDMAN	12'&14'-1987<	Low Cost
HALLMARK	REDMAN	12'&14'-1988>	Average
HAWTHORN	LIBERTY	12',14'&24'-1981<	Low Cost
HAWTHORN	LIBERTY	12',14'&24'-1982>	Average
HIGH COUNTRY	CONTINENTAL	14'&16'-1979<	Low Cost
HIGH COUNTRY	CONTINENTAL	14'&16'-1980-1985, 24'-1982<	Average
HIGH COUNTRY	CONTINENTAL	28'-1981<	Average
HIGH COUNTRY	CONTINENTAL	14'&16'-1986>, 24'-1983>	Good
HIGH COUNTRY	CONTINENTAL	28'- 1982-1985	Good
HIGH COUNTRY	CONTINENTAL	28'-1986>	Excellent
HIGHLAND PARK	FLEETWOOD	24'-1979<, 28'-1979<	Low Cost
HIGHLAND PARK	FLEETWOOD	24'-1980-1985, 26'-1985<, 28'-1982>	Average
HIGHLAND PARK	FLEETWOOD	24', 26'&28'-1986>	Good
HILLCREST	SKYLINE	12'-1987<, 14'-1984<, 20'-1985	Low Cost
HILLCREST	SKYLINE	24'-1980<, 28'-1979<	Low Cost
HILLCREST	SKYLINE	12'-1988>, 14'-1985>, 20'-1986>	Average
HILLCREST	SKYLINE	24'-1981>, 28'-1980>	Average
HOLLYPARK	GERRING	14'-1978<	Low Cost
HOLLYPARK	GERRING	14'-1974-1983	Average

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
HOLLYPARK	GERRING	14'-1984>	Good
HOMESTEAD	SCHULT	14'-1980<	Low Cost
HOMESTEAD	SCHULT	14'-1981-1985	Average
HOMESTEAD	SCHULT	14'-1986>	Good
HOMETTE	SKYLINE	12'-1987<, 14'-1985<, 20'-1982<	Low Cost
HOMETTE	SKYLINE	24'-1980<, 28'-1975<	Low Cost
HOMETTE	SKYLINE	12'-1988>, 14'-1986>, 20'-1983>	Average
HOMETTE	SKYLINE	24'-1981>, 28'-1976-1987	Average
HOMETTE	SKYLINE	28'-1988>	Good
HOUSE/HARMONY	HOUSE/HARMONY	12'-1982<	Low Cost
HOUSE/HARMONY	HOUSE/HARMONY	12'-1983>	Average
HUNTINGTON	CHAMPION	14'&16'-1981<, 24'-1975<	Low Cost
HUNTINGTON	CHAMPION	28'-1979<	Low Cost
HUNTINGTON	CHAMPION	14'&16'-1982>, 24'-1976>	Average
HUNTINGTON	CHAMPION	28'-1980>	Average
IMPERIAL	VIKING-EDGEW-	24'-1976<	Average
IMPERIAL	VIKING-EDGEW-	24'-1977-1983	Good
IMPERIAL	VIKING-EDGEW-	24'-1984>	Excellent
INVADER	CHICKASHA	12'-1985<, 14'-1984<	Low Cost
INVADER	CHICKASHA	12'-1986>, 14'-1985>	Average
JUBILEE	MAJESTIC	14'-1978<	Low Cost
JUBILEE	MAJESTIC	14'-1979-87	Average
JUBILEE	MAJESTIC	14'-1988>	Good
KENTWOOD	KENTWOOD	12'-1985<, 14'&24'-1979<	Low Cost
KENTWOOD	KENTWOOD	12'-1986>, 14'-1980-87, 24'-1980>	Average
KENTWOOD	KENTWOOD	14'-1988>	Good
KINGSWOOD	NOBILITY	14'-1986<, 16'-1981<, 24'-1980<	Low Cost
KINGSWOOD	NOBILITY	12'&28'-1985<	Low Cost
KINGSWOOD	NOBILITY	12'&28'-1986>, 14'-1987> ,	Average
KINGSWOOD	NOBILITY	16'-1982>, 24'-1981>	Average
KIRKWOOD	REDMAN	12'&28'-1987<, 14'-1985<, 24'-1982<	Low Cost
KIRKWOOD	REDMAN	12'&28'-1988>, 14'-1986>, 24'-1983>	Average
KIT	KIT	12'-1981<, 14'-1980<, 24'-1977<	Low Cost
KIT	KIT	28'-1974<	Low Cost
KIT	KIT	12'-1982>, 14'-1981>, 24'-1975-84	Average
KIT	KIT	28'-1975-1985	Average
KIT	KIT	24'-1985>, 28'-1986>	Good
KOZY	COMMODORE	14'-1983<, 24'-1979<, 28'-1981<	Low Cost
KOZY	COMMODORE	14'-1984>, 24'-1980>, 28'-1982>	Average
LAKESWOOD	GALLATIN	ALL SIZES 1977<	Low Cost
LAKESWOOD	GALLATIN	ALL SIZES 1978-85	Average
LAKESWOOD	GALLATIN	ALL SIZES 1986>	Good
LAMPLIGHTER	MODULINE	12'&24'-1982<, 14'-1980<	Low Cost
LAMPLIGHTER	MODULINE	12'&24'-1983>, 14'-1981>	Average
LANCER	LANCER	12'-1979<, 14'-1976<, 20'-1977<	Low Cost
LANCER	LANCER	24'-1981<, 28'-1973<	Low Cost
LANCER	LANCER	12'-1980>, 14'-1977-84, 20'-1978-85	Average
LANCER	LANCER	24'-1982>, 28'-1974-1982	Average
LANCER	LANCER	14'-1985>, 20'-1986>, 28'-1983>	Good
LANDMARK	FUQUA	14'-1979<	Low Cost
LANDMARK	FUQUA	14'-1980-86	Average
LANDMARK	FUQUA	14'-1987>	Good
LEISURE HOME	UTAH	14'-1983<, 24'-1977<	Low Cost
LEISURE HOME	UTAH	14'-1984>, 24'-1978-1986	Average
LEISURE HOME	UTAH	24'-1987>	Good
LIBERTY	LIBERTY	12'-1984<, 14'-1985<, 24'-1979<	Low Cost
LIBERTY	LIBERTY	12'-1985>, 14'-1986>, 24'-1980>	Average
LYNN HAVEN	REDMAN	12'&28'-1987<, 14'-1985<, 24'-1982<	Low Cost
LYNN HAVEN	REDMAN	12'&28'-1988>, 14'-1986>, 24'-1983>	Average
MAGNOLIA	GUERDON	12', 14'&20'-1977<	Low Cost
MAGNOLIA	GUERDON	12', 14'&20'-1978-84, 24'-1981<	Average
MAGNOLIA	GUERDON	12', 14'&20'-1985>, 24'-1982-1985	Good
MAGNOLIA	GUERDON	24'-1986>	Excellent
MAJESTIC	MAJESTIC	14'-1983<, 24'-1976<	Low Cost
MAJESTIC	MAJESTIC	14'-1984>, 24'-1977-1986	Average

PART 4: REPLACEMENT COST

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
MAJESTIC	MAJESTIC	24'-1987>	Good
MANATEE	CHAMPION	ALL SIZES 1984<	Low Cost
MANATEE	CHAMPION	ALL SIZES 1985>	Average
MANOR	COMMODORE	12'-1980<, 14'-1981<, 24'-1979<	Low Cost
MANDR	COMMODORE	28'-1981<	Low Cost
MANOR	COMMODORE	12'-1981>, 14'-1982>, 24'-1980>	Average
MANOR	COMMODORE	28'-1982>	Average
MARLETTE	MARLETTE	14'&20'-1979<	Low Cost
MARLETTE	MARLETTE	12'-1986<, 14'&20'-1980>, 24'-1985<	Average
MARLETTE	MARLETTE	12'-1987>, 24'-1986>	Good
MARSHFIELD	WICK BUILDING	14'-1981<	Low Cost
MARSHFIELD	WICK BUILDING	14'-1982>	Average
MAYFLOWER	GUERDON	14'-1978<, 24'-1977<	Low Cost
MAYFLOWER	GUERDON	14'-1979-85, 24'-1978-85	Average
MAYFLOWER	GUERDON	14'&24'-1986>	Good
MEADOWBROOK	GUERDON	14'-1984<	Low Cost
MEADOWBROOK	GUERDON	14'-1985>	Average
MEDALLION	CHICKASHA	ALL SIZES 1981<	Low Cost
MEDALLION	CHICKASHA	ALL SIZES 1982>	Average
MEDFORD	FLEETWOOD	12'-1985<, 14'-1984<, 24'-1981<	Low Cost
MEDFORD	FLEETWOOD	28'-1979<	Low Cost
MEDFORD	FLEETWOOD	12'-1986>, 14'-1985>, 24'-1982>	Average
MEDFORD	FLEETWOOD	28'-1980>	Average
MELODY	MELODY HOMES	12'&14'-1984<, 24'&28'-1982<	Low Cost
MELODY	MELODY HOMES	12'&14'-1985>, 24'&28'-1983>	Average
METAMORA	CHICKASHA	ALL SIZES 1981<	Low Cost
METAMORA	CHICKASHA	ALL SIZES 1982>	Average
MINUTEMAN	LIBERTY	12'&14'-1985<, 24'-1979<	Low Cost
MINUTEMAN	LIBERTY	12'&14'-1986>, 24'-1980>	Average
MONARCH	MONARCH	24'-1977<	Low Cost
MONARCH	MONARCH	24'-1978-1987	Average
MONARCH	MONARCH	24'-1988>	Good
MONTCLAIR	CENTRAL	12'-1982<, 14'&28'-1977<, 16'-1980<	Low Cost
MONTCLAIR	CENTRAL	12'-1983>, 14'&28'-1978-1986,	Average
MONTCLAIR	CENTRAL	16'-1981>, 24'-1982<, 26'-1986<	Average
MONTCLAIR	CENTRAL	14'-1987>, 14'& 28'-1987>	Good
MONTROSE	CENTRAL	12'-1982<, 14'&28'-1977, 16'-1980<	Low Cost
MONTROSE	CENTRAL	12'-1983>, 14'&28'-1978-1986,	Average
MONTROSE	CENTRAL	16'-1981>, 24'-1982<, 26'-1986<	Average
MONTROSE	CENTRAL	14'-1987>, 14'& 28'-1987>	Good
NASHUA	CONCHEMCO	12'-1981<, 14'-1982<, 24'-1979<	Low Cost
NASHUA	CONCHEMCO	12'-1982>, 14'-1983>	Average
NASHUA	CONCHEMCO	24'-1978-1985	Average
NASHUA	CONCHEMCO	24'-1986>	Good
NASHUA	ZIMMER	14'-1982<, 24'-1980<	Low Cost
NASHUA	ZIMMER	14'-1983>, 24'-1981>	Average
NATIONAL	NATIONAL	12'-1985<, 14'-1983<, 24'-1982<	Low Cost
NATIONAL	NATIONAL	12'-1986>, 14'-1984>, 24'-1983>	Average
NEW MOON	REDMAN	12'-1987<, 14'-1984<, 24'-1980<, 28'-1983<	Low Cost
NEW MOON	REDMAN	28'-1983<	Low Cost
NEW MOON	REDMAN	12'-1988>, 14'-1985>, 24'-1981>	Average
NEW MOON	REDMAN	28'-1984>	Average
NEWPORT	INTERNATIONAL	14'-1984<	Low Cost
NEWPORT	INTERNATIONAL	14'-1985>	Average
NORMANDY	GUERDON	14'-1978<, 24'-1977<	Low Cost
NORMANDY	GUERDON	14'-1979-85, 24'-1978-85	Average
NORMANDY	GUERDON	14'&24'-1986>	Good
NOVA	COMMODORE	12'-1981<, 14'-1985<, 20', 24'&28'-1983<	Low Cost
NOVA	COMMODORE	12'-1982>, 14'-1986>	Average
NOVA	COMMODORE	20', 24'&28'-1984>	Average
OAK COVE	SKYLINE	14'-1984<, 16'-1985<, 24'-1975<	Low Cost
OAK COVE	SKYLINE	28'-1982<	Low Cost
OAK COVE	SKYLINE	14'-1985>, 16'-1986>, 24'-1976-1987	Average
OAK COVE	SKYLINE	28'-1983>	Average

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
OAK COVE	SKYLINE	24'-1988>	Good
OAK MANOR	SKYLINE	14'-1984<, 16'-1985<, 24'-1975<	Low Cost
OAK MANOR	SKYLINE	28'-1982<	Low Cost
OAK MANOR	SKYLINE	14'-1985>, 16'-1986>, 24'-1976-1987	Average
OAK MANOR	SKYLINE	28'-1983>	Average
OAK MANOR	SKYLINE	24'-1988>	Good
OAKBROOK	LIBERTY	12'&14'-1985<, 24'-1979<	Low Cost
OAKBROOK	LIBERTY	12'&14'-1986>, 24'-1980>	Average
OAKMANOR	GUERDON	16'-1980<	Low Cost
OAKMANOR	GUERDON	16'-1981>	Average
OAKMANOR	GUERDON	14'-1980<, 24'-1973<, 28'-1981<	Low Cost
OAKMANOR	GUERDON	14'-1981>, 24'-1974-86, 28'-1982>	Average
OAKMANOR	GUERDON	24'-1986>	Good
OAKVILLA	GUERDON	14'-1980<, 24'-1973<, 28'-1981<	Low Cost
OAKVILLA	GUERDON	14'-1981>, 24'-1974-86, 28'-1982>	Average
OAKVILLA	GUERDON	24'-1986>	Good
OLYMPIA	KIT	12'-1981<, 14'-1980<, 24'-1977<	Low Cost
OLYMPIA	KIT	28'-1974<	Low Cost
OLYMPIA	KIT	12'-1982>, 14'-1981>, 24'-1975-84	Average
OLYMPIA	KIT	28'-1975-1985	Average
OLYMPIA	KIT	24'-1985>, 28'-1986>	Good
OLYMPIAN	MODULINE	12'&24'-1982<, 14'-1980<	Low Cost
OLYMPIAN	MODULINE	12'&24'-1983>, 14'-1981>	Average
PACESETTER	CONCHEMCO	12'-1984<, 14'-1985<	Low Cost
PACESETTER	CONCHEMCO	12'-1985>, 14'-1986>	Average
PACIFICA	COMMODORE	24'-1979<, 28'-1981<	Low Cost
PACIFICA	COMMODORE	24'-1980>, 28'-1982>	Average
PAN AMERICAN	COMMODORE	24'-1984<	Average
PAN AMERICAN	COMMODORE	24'-1985>	Good
PARAMOUNT	COMMODORE	14'-1980<, 21'-1981<	Low Cost
PARAMOUNT	COMMODORE	14'-1981>, 20'-1982>, 24'-1983<	Average
PARAMOUNT	COMMODORE	28'-1985<	Average
PARAMOUNT	COMMODORE	24'-1984>, 28'-1986>	Good
PARKMONT	CONTINENTAL	14'&16'-1979<, 14'&16'-1980-1985, 24'-1982<	Low Cost
PARKMONT	CONTINENTAL	26'-1981<	Average
PARKMONT	CONTINENTAL	14'&16'-1986>, 24'-1983>	Good
PARKMONT	CONTINENTAL	26'-1982-1985	Good
PARKMONT	CONTINENTAL	26'-1986>	Excellent
PARKWAY	FUQUA	12', 14'&24'-1979<, 20'-1981<	Low Cost
PARKWAY	FUQUA	12'&24'-1980-84, 14'-1980-85,	Average
PARKWAY	FUQUA	20'-1982-85, 26'-1981<	Average
PARKWAY	FUQUA	12'&24'-1985>, 14'&20'-1986>, 26'-1982>	Good
PARKWOOD	PARKWOOD	12'-1981<, 14'-1983<	Low Cost
PARKWOOD	PARKWOOD	12'-1982>, 14'-1984>	Average
PEERLESS	LIBERTY	12'&14'-1985<, 24'-1979<	Low Cost
PEERLESS	LIBERTY	12'&14'-1986>, 24'-1980>	Average
PINEBROOK	WICK BUILDING	28'-1985<	Average
PINEBROOK	WICK BUILDING	28'-1986>	Good
PONDEROSA	SHELTEREX	12'&24'-1978<, 14'-1980<	Low Cost
PONDEROSA	SHELTEREX	12'&24'-1979-1987, 14'-1981>	Average
PONDEROSA	SHELTEREX	12'&24'-1988>	Good
PRINCESS	ZIMMER	14'-1982<, 24'-1980<	Low Cost
PRINCESS	ZIMMER	14'-1983>, 24'-1981>	Average
QUEENSTOWN	FUQUA	14'-1979<	Low Cost
QUEENSTOWN	FUQUA	14'-1980-86, 24'&26'-1984<	Average
QUEENSTOWN	FUQUA	14'-1987>, 24'-1985>, 26'-1984-86	Good
QUEENSTOWN	FUQUA	26'-1987	Excellent
REDMAN	REDMAN	12'-1986<, 14'-1984<, 24'-1980<	Low Cost
REDMAN	REDMAN	26'-1983<	Low Cost
REDMAN	REDMAN	12'-1987>, 14'-1985>, 24'-1981>	Average
REDMAN	REDMAN	26'-1984>	Average
REGAL	KIT	14'-1975<, 28'-1973<	Low Cost
REGAL	KIT	14'-1976-85, 24'-1984<, 28'-1974-85	Average
REGAL	KIT	14'&28'-1986>, 24'-1985>	Good

PART 4: REPLACEMENT COST

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
REGAL	REGAL	14'-1980<	Low Cost
REGAL	REGAL	14'-1981>, 28'-1983<	Average
REGAL	REGAL	28'-1984>	Good
REMINGTON	SUNRIZON	14'-1987<, 16'-1987<, 18'-1988<	Low Cost
REMINGTON	SUNRIZON	14'-1988>, 16'-1988>	Average
REVERE	DMH	12'-1981<, 14'-1981<, 24'-1977<	Low Cost
REVERE	DMH	12'-1982>, 14'-1982>, 24'-1978>	Average
RIDEAU	ATCO	12'-1984<, 14'-1982<, 16' ALL	Low Cost
RIDEAU	ATCO	24'-1978<	Low Cost
RIDEAU	ATCO	12'-1985>, 14'-1983>, 24'-1979>	Average
RIDGEWOOD	LIBERTY	12'&14'-1985<, 24'-1979<	Low Cost
RIDGEWOOD	LIBERTY	12'&14'-1986>, 24'-1980>	Average
RITZCRAFT	WICKES HOMES	12'-1985<, 14'-1982<, 24'-1975<	Low Cost
RITZCRAFT	WICKES HOMES	12'-1986>, 14'-1983>, 24'-1976-1986	Average
RITZCRAFT	WICKES HOMES	24'-1987>	Good
ROLLOHOME	ROLLOHOME	12'-1978<, 14'-1981<, 16'-1976<	Low Cost
ROLLOHOME	ROLLOHOME	12'-1979-1986, 14'-1982>, 16'-1977-85	Average
ROLLOHOME	ROLLOHOME	14'-1987>, 16'-1986>	Good
ROSEWOOD	DEROSE	16'-1985>	Average
ROYAL OAKS	KIT	14'&28'-1981<, 24'-1974<	Low Cost
ROYAL OAKS	KIT	14'&28'-1982>, 24'-1975-1985	Average
ROYAL OAKS	KIT	24'-1986>	Good
RUSHMORE HOME	RUSHMORE	14'-1979<, 16'-1977<	Low Cost
RUSHMORE HOME	RUSHMORE	14'-1980-1987, 16'-1978-1985	Average
RUSHMORE HOME	RUSHMORE	14'-1988>, 16'-1986>	Good
SAFEWAY	COMMODORE	12'-1985<, 14'-1982<, 24'-1981<	Low Cost
SAFEWAY	COMMODORE	12'-1986>, 14'-1983>, 24'-1982>	Average
SANDPOINTE	FLEETWOOD	12', 14'-1973<, 12', 14'-1983<	Low Cost
SANDPOINTE	FLEETWOOD	12', 14'-1984>	Average
SECURITY	SHELTEREX	12'-1983<, 14'-1985<, 24'-1976<	Low Cost
SECURITY	SHELTEREX	12'-1984>, 14'-1986>, 24'-1977-1987	Average
SECURITY	SHELTEREX	24'-1988>	Good
SEQUOIA	CHAMPION	12'&14'-1983<, 24'&28'-1981<	Low Cost
SEQUOIA	CHAMPION	12'&14'-1984>, 24'&28'-1982>	Average
SEVILL	REDMAN	12'-1986<, 14'-1984<, 24'-1980<	Low Cost
SEVILL	REDMAN	26'-1983<	Low Cost
SEVILL	REDMAN	12'-1987>, 14'-1985>, 24'-1981>	Average
SEVILL	REDMAN	26'-1984>	Average
SEVILLE	SUNRIZON	24'-1983<, 26'-1984<, 28'-1985<	Low Cost
SEVILLE	SUNRIZON	24'-1984>, 26'-1985>, 28'-1986>	Average
SHELBY	COMMODORE	12'-1982<, 14'-1978<, 24'-1979<	Low Cost
SHELBY	COMMODORE	12'-1983>, 14'-1979>, 24'-1980>	Average
SHELTEREX	SHELTEREX	12'-1983<, 14'-1985<, 24'-1976<	Low Cost
SHELTEREX	SHELTEREX	12'-1984>, 14'-1986>, 24'-1977-1987	Average
SHELTEREX	SHELTEREX	24'-1988>	Good
SHERIDAN	HARMONY	12'&24'-1979<, 14'-1981<	Low Cost
SHERIDAN	HARMONY	12'&24'-1980>, 14'-1982>	Average
SIERRA	KIT	14'-1981<, 24'-1977<	Low Cost
SIERRA	KIT	14'-1982>, 24'-1978-84	Average
SIERRA	KIT	24'-1985>	Good
SILVERCREST	SILVERCREST	12'-1983<, 20'-1979<, 24'-1975<	Low Cost
SILVERCREST	SILVERCREST	12'-1984>, 20'-1980>, 24'-1976-1987	Average
SILVERCREST	SILVERCREST	24'-1988>	Good
SKYLINE	SKYLINE	12'-1987<, 14'-1985<, 20'-1982<	Low Cost
SKYLINE	SKYLINE	24'-1980<, 28'-1975<	Low Cost
SKYLINE	SKYLINE	12'-1988>, 14'-1986>, 20'-1983>	Average
SKYLINE	SKYLINE	24'-1981>, 28'-1976-1987	Average
SKYLINE	SKYLINE	28'-1988>	Good
SPACEMASTER	SPACEMASTER	12'-1984<, 24'-1986<	Low Cost
SPACEMASTER	SPACEMASTER	12'-1985-1987, 24'-1987>	Average
SPACEMASTER	SPACEMASTER	12'-1988>	Good
SPARTON	SPARTON	12'-1978<, 14'-1977<	Low Cost
SPARTON	SPARTON	12'-1979-1987, 14'-1978-1985	Average
SPARTON	SPARTON	12'-1988>, 14'-1986>	Good
SPRINGBROOK	SKYLINE	14'&16'-1983<	Low Cost
SPRINGBROOK	SKYLINE	14'&16'-1984>	Average

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
STAR	BENDIX-BOISE	12'-1984<, 14'-1986<, 24'-1981<	Low Cost
STAR	BENDIX-BOISE	12'-1985>, 14'-1987>, 24'-1982>	Average
STATLER	GUERDON	14'-1981<, 24'-1973<	Low Cost
STATLER	GUERDON	14'-1982>, 24'-1974-1984	Average
STATLER	GUERDON	24'-1985>	Good
STIEGLER	STIEGLER	12'-1983<, 14'-1982<	Low Cost
STIEGLER	STIEGLER	12'-1984>, 14'-1983>	Average
STONEHAVEN	KIT	14'-1975<, 28'-1973<	Low Cost
STONEHAVEN	KIT	14'-1976-85, 24'-1984<, 28'-1974-85	Average
STONEHAVEN	KIT	14'&28'-1986>, 24'-1985>	Good
STYLECRAFT	WICKES HOMES	12'-1985<, 14'-1983<	Low Cost
STYLECRAFT	WICKES HOMES	12'-1986>, 14'-1984>	Average
SUNDANCER	WINSTON	12'-1983<, 14'-1982<	Low Cost
SUNDANCER	WINSTON	12'-1984>, 14'-1983>	Average
SUNVALLEY	SKYLINE	12'-1983<, 14'-1987<, 24'-1977<	Low Cost
SUNVALLEY	SKYLINE	12'-1984>, 14'-1988>, 24'-1978-1987	Average
SUNVALLEY	SKYLINE	24'-1988>	Good
SUNVIEW	CHAMPION	12'&24'-1981<, 14'-1984<	Low Cost
SUNVIEW	CHAMPION	12'&24'-1982>, 14'-1985>	Average
SUNWOOD	SKYLINE	12'-1983<, 14'-1987<, 24'-1977<	Low Cost
SUNWOOD	SKYLINE	12'-1984>, 14'-1988>, 24'-1978-1987	Average
SUNWOOD	SKYLINE	24'-1988>	Good
SUPERIOR	CHICKASHA	12'-1983<, 14'-1985<	Low Cost
SUPERIOR	CHICKASHA	12'-1984>, 14'-1986>	Average
TAMARACK	CHAMPION	ALL SIZES 1984<	Low Cost
TAMARACK	CHAMPION	ALL SIZES 1985>	Average
TAMMARON	CHAMPION	24'-1981<	Low Cost
TAMMARON	CHAMPION	24'-1982>	Average
TITAN	CHAMPION	12'-1986<, 14'-1985<, 24'-1983<, 28'-1979<	Low Cost
TITAN	CHAMPION	14'-1985>, 24'-1984>, 28'-1980>	Average
TOWN & COUNTRY	TOWN&COUNTRY	12'-1983-1987, 14'-1978-1985, 16'-1985>	Average
TOWN & COUNTRY	TOWN&COUNTRY	12'-1982<, 14'-1977<, 16'-1984<	Low Cost
TOWN & COUNTRY	TOWN&COUNTRY	12'-1988>, 14'-1986>	Good
TOWNHOUSE	TOWNHOUSE	12'&14'&24'-1978<	Low Cost
TOWNHOUSE	TOWNHOUSE	12'-1979-1986, 14'-1979-1987,	Average
TOWNHOUSE	TOWNHOUSE	24'-1979-1987	Average
TOWNHOUSE	TOWNHOUSE	12'-1987>, 14'&24'-1988>	Good
TRAVELO	TRAVELO	12'-1973<, 14'-1976<, 24'-1976<	Low Cost
TRAVELO	TRAVELO	12'-1974-1983, 14'-1977-85, 24'-1977-87	Average
TRAVELO	TRAVELO	12'-1984>, 14'-1986>, 24'-1988>	Good
TRENTON	MANN	12'-1982<, 14'-1980<	Low Cost
TRENTON	MANN	12'-1983>, 14'-1981>	Average
TWIN LAKES	GUERDON	12',24'&28'-1978<, 14'-1981<	Low Cost
TWIN LAKES	GUERDON	12',24'&28'-1978-85, 14'-1982>	Average
TWIN LAKES	GUERDON	12',24'&28'-1986>	Good
UNITED	UNITED	12'-1986<, 14'-1982<, 24'-1987>, 14'-1983>, 24'-1984<	Low Cost
UNITED	UNITED	24'-1985>	Average
UNITED	UNITED	24'-1985>	Good
UTAH	UTAH	12'-1979<, 20'-1978<, 24'-1978<	Low Cost
UTAH	UTAH	28'-1978<	Low Cost
UTAH	UTAH	12'-1980-1987, 20'-1979-1987,	Average
UTAH	UTAH	24'-1979-1987, 28'-1979-1987	Average
UTAH	UTAH	12'&14'&20'&24'&28	Good
VAGABOND	GUERDON	ALL SIZES 1981<	Low Cost
VAGABOND	GUERDON	ALL SIZES 1982>	Average
VAN DYKE	GUERDON	12',14'&24'-1978<, 20'-1981<	Low Cost
VAN DYKE	GUERDON	28'-1973<	Low Cost
VAN DYKE	GUERDON	12',14'&24'-1979-85, 20'-1982>	Average
VAN DYKE	GUERDON	28'-1974-1984	Average
VAN DYKE	GUERDON	12',14'&24'-1986>, 28'-1985>	Good
VANTAGE	SHELTEREX	12'-1978<, 14'-1979<, 24'-1977<	Low Cost
VANTAGE	SHELTEREX	12'-1979-1987, 14'-1980>, 24'-1978-87	Average
VANTAGE	SHELTEREX	12'&24'-1988>	Good
VENTURA	KIT	14'-1984<, 24'-1985>	Low Cost
VENTURA	KIT	14'-1985>	Average

PART 4: REPLACEMENT COST

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
VICTOR	DEROSE	12'&14'ALL YEARS, 16'-1982<	Low Cost
VICTOR	DEROSE	16'-1983>	Average
VICTORIA	VICTORIA	12'-1979<, 14'-1978<	Low Cost
VICTORIA	VICTORIA	12'-1980>, 14'-1979-1987	Average
VICTORIA	VICTORIA	14'-1988>	Good
VOGUE	FLEETWOOD	12'-1979<, 14'-1980<, 24'-1975<	Low Cost
VOGUE	FLEETWOOD	12'-1980-1985, 14'-1981>, 24'-1976-1985	Average
VOGUE	FLEETWOOD	12'-1986>, 24'-1986>	Good
VOGUE	VOGUE	14'-1984<, 24'-1982<	Low Cost
VOGUE	VOGUE	14'-1985>, 24'-1983>	Average
WAYSIDE	KAUFMAN/BROAD	12'&14'-1981<, 20'-1979<, 24'-1983<	Low Cost
WAYSIOE	KAUFMAN/BROAD	12'&14'-1982>, 20'-1980>, 24'-1984>	Average
WEDGEWOOD	TAYLOR	14'-1982<	Low Cost
WEDGEWOOD	TAYLOR	14'-1983>	Average
WESTBROOK	BENDIX-BOISE	12'-1986<, 24'-1978<	Low Cost
WESTBROOK	BENDIX-BOISE	12'-1987>, 24'-1979>	Average
WESTCHESTER	CONCHEMCO	12'&14'-1984<, 24'-1981<	Low Cost
WESTCHESTER	CONCHEMCO	12'&14'-1985>, 24'-1982>	Average
WESTERNER	ROYAL	12'-1983<, 14'-1982<, 24'-1978<	Low Cost
WESTERNER	ROYAL	12'-1984>, 14'-1983>, 24'-1979-1987	Average
WESTERNER	ROYAL	24'-1988>	Good
WESTFIELD	FLEETWOOD	12'-1979<, 14'-1980<, 24'-1975<	Low Cost
WESTFIELD	FLEETWOOD	12'-1980-1985, 14'-1981>, 24'-1976-1985	Average
WESTFIELD	FLEETWOOD	12'-1986>, 24'-1986>	Good
WESTMONT	CONTINENTAL	14'-1979<, 16'-1973<	Low Cost
WESTMONT	CONTINENTAL	14'-1980-1985, 16'-1974-1981	Average
WESTMONT	CONTINENTAL	24'-1982<, 24'&28'-1982<	Average
WESTMONT	CONTINENTAL	14'-1986>, 16'-1982>, 24'-1983>	Good
WESTMONT	CONTINENTAL	26'&28'-1982-1985	Good
WESTMONT	CONTINENTAL	26'&28'-1986>	Excellent
WESTON	FLEETWOOD	12'&14'-1984<, 24'-1977<	Low Cost
WESTON	FLEETWOOD	12'&14'-1985>, 24'-1978>	Average
WESTPARK	CONTINENTAL	14'&16'-1979<	Low Cost
WESTPARK	CONTINENTAL	14'&16'-1980-1985, 24'-1982<	Average
WESTPARK	CONTINENTAL	28'-1981<	Average
WESTPARK	CONTINENTAL	14', 16'-1986>, 24'-1983>	Good
WESTPARK	CONTINENTAL	26'-1982-1985	Good
WESTPARK	CONTINENTAL	26'-1986>	Excellent
WESTRIDGE	FUQUA	24'-1980<, 28'-1983<	Average
WESTRIDGE	FUQUA	24'-1982-86, 28'-1984-86	Good
WESTRIDGE	FUQUA	24'&28'-1987>	Excellent
WESTWAY	WESTWAY	24'-1982<	Average
WESTWAY	WESTWAY	24'-1983-1986	Good
WESTWAY	WESTWAY	24'-1987>	Excellent
WESTWOOD	BENDIX-BOISE	12'-1986<, 14'-1983<, 24'-1979<	Low Cost
WESTWOOD	BENDIX-BOISE	12'-1987>, 14'-1984>, 24'-1980>	Average
WESTWOOD	WESTWAY	24'-1980<, 28'-1982<	Average
WESTWOOD	WESTWAY	24'-1981-1985, 28'-1983-1986	Good
WESTWOOD	WESTWAY	24'-1986>, 28'-1987>	Excellent
WESTWOOD	WESTWOOD	14'-1988<	Low Cost
WICKCRAFT	WICK BUILDING	14'-1984<	Low Cost
WICKCRAFT	WICK BUILDING	14'-1985>	Average
WICKES	WICKES HOMES	12'-1985<, 14'-1983<, 24'-1979<	Low Cost
WICKES	WICKES HOMES	12'-1986>, 14'-1984>, 24'-1980>	Average
WILDWOOD	COMMODORE	12'-1980<, 14'-1981<, 20'-1983<	Low Cost
WILDWOOD	COMMODORE	24'-1983<	Low Cost
WILDWOOD	COMMODORE	12'-1981>, 14'-1982>, 20'-1984>	Average
WILDWOOD	COMMODORE	24'-1984-1985, 28'-1984<	Average
WILDWOOD	COMMODORE	24'-1986>, 28'-1985>	Good
WINDSOR	WINDSOR	14'-1977<	Low Cost
WINDSOR	WINDSOR	14'-1978-1985	Average
WINDSOR	WINDSOR	14'-1986>	Good
WINDSOR	ZIMMER	14'-1975>	Low Cost
WINDSOR	ZIMMER	14'-1976-1987	Average

MODEL NAME	MANUFACTURER	WIDTH - YEAR CONSTRUCTION	QUALITY
WOOD HAVEN	GUERDON	12',14'&16'-1981<, 24'-1975<	Low Cost
WOOD HAVEN	GUERDON	12',14'&16'-1982>, 24'-1976-1984	Average
WOOD HAVEN	GUERDON	28'-1984<	Average
WOOD HAVEN	GUERDON	24'&28'-1985>	Good
WOODLAKE	CHAMPION	12'&14'-1985<, 24'-1983<	Low Cost
WOODLAKE	CHAMPION	28'-1984<	Low Cost
WOODLAKE	CHAMPION	12'&14'-1986>, 24'-1984>, 28'-1985>	Average
WOODLAND	KAUFMAN/BROAD	14'-1982<	Low Cost
WOODLAND	KAUFMAN/BROAD	14'-1983>	Average
WOODLAND	WOODLAND	12'-1983<, 14'-1984<, 20'-1985<	Low Cost
WOODLAND	WOODLAND	24'-1979<	Low Cost
WOODLAND	WOODLAND	12'-1984>, 14'-1985>, 20'-1986>	Average
WOODLAND	WOODLAND	24'-1980>	Average
WOODRIDGE	MODULINE	12'-1980<, 14'-1982<, 28'-1982<	Low Cost
WOODRIDGE	MODULINE	12'-1981-87, 14'&28'-1983>, 24'-1987<	Average
WOODRIDGE	MODULINE	12'&24'-1988>	Good
ZIMMER	ZIMMER	12'-1985<	Low Cost
ZIMMER	ZIMMER	12'-1986>	Average
0700 SERIES	KAUFMAN/BROAD	24'-1985<	Average
0700 SERIES	KAUFMAN/BROAD	24'-1986>	Good
0900 SERIES	KAUFMAN/BROAD	28'-1980<, 24'-1986<, 28'-1981-87	Low Cost
0900 SERIES	KAUFMAN/BROAD	24'-1987>, 28'-1988>	Average
0900 SERIES	KAUFMAN/BROAD	24'-1987>, 28'-1988>	Good
1800 SERIES	KAUFMAN/BROAD	14'-1982<	Low Cost
1800 SERIES	KAUFMAN/BROAD	14'-1983>	Average
8800 SERIES	KAUFMAN/BROAD	24'-1977<, 26'-1980<	Low Cost
8800 SERIES	KAUFMAN/BROAD	24'-1978-87, 28'-1981>	Average
8800 SERIES	KAUFMAN/BROAD	24'-1988>	Good

PART 4: REPLACEMENT COST

43.4. MANUAL PRICING INSTRUCTIONS

Please note that the pricing schedules are computer-generated utilizing mathematical formulas to generate costs. It is possible to note a slightly different replacement cost new when comparing the usage of computer-generated costs to the pricing schedules appearing in this manual. This is caused by the rounding procedures of the computer and should not be considered an error in the printed schedules or the computer-generated value.

Mobile homes differ from dwellings in their pricing. The basic mobile home unit is purchased as a unit from the factory and moved to its location. The basic unit therefore has a standard price and reflects a standard complement of features including plumbing and heating and air conditioning. The purchaser may, once the mobile home is delivered, add to it by putting it on a permanent foundation, crawl space or basement, adding rooms, porches, garages, etc., and possibly other features such as fireplaces.

Typically mobile homes have a shorter expected life than normal dwellings and the effective quality is less than that of a comparably-sized house. To facilitate the valuation of mobile homes and the additions, we will be using a special mobile home schedule to price the base and applying the residential pricing tables for the additions. The appropriate quality grade adjustments are incorporated through the overall grade factor derived from the residential tables.

Mobile Home Grade	Comparable Dwelling Grade for Addition Pricing	Associated Grade Factor
L	2	.49
A	3	.68
G	4	.85
E	5	1.00

From this grade table you will note that we are using the Excellent mobile homes as our base grade for pricing. We will effect adjustments for quality grade to both the mobile homes and additions in the final step of applying the grade factors.

Step 1. - Base Price Determine the length and width of the mobile home. Computer pricing will be determined to the nearest foot. For ease of calculations, the manual tables have been printed in two foot increments of length. On the schedule, select the row corresponding to the length of the mobile home (round up to nearest even foot length). Then go across the table until you find the rate corresponding to the width of the mobile home. Apply this rate to the actual square footage of the mobile home to determine its base cost.

Step 2. - Base Price Adjustments Make the necessary base price adjustments to account for variations from the base specifications. These are addressed in the following paragraphs.

Unfinished Area: Make deductions for an area within the living area of the mobile home which lacks interior finish, such as ceiling, wall and floor finish. Deduction is per square foot.

Heating and Air Conditioning: The base price includes a central heating system. A deduction must be made for "no heating" and non-central systems, and an addition must be made for central air conditioning.

These adjustments must be manually computed and entered through the flat value add field.

Plumbing: The base price assumes a "normal" complement of plumbing fixtures for the mobile home determined on the basis of the grade. An addition or deduction is made for excesses above or deficiencies below these norms.

Grade	Number Of Fixtures
L	5
A	7
G	8
E	8

Step 3. - Additions Add the price for all additions, i.e., areas attached to but not included in the dwelling areas. These include, for mobile homes, living area additions, as well as porches, attached garages and carports, and mobile home additions. Use the dwelling additions schedules in Section 42 for additions other than living area. Mobile Home Living Area additions rates are included in this section.

The area of the addition should be rounded to the nearest 10 square feet and the pricing interpolated from the pricing schedule. The values shown represent points (increments of \$100).

Step 4. - Other Features Compute the price of the specified Other Features from that table. Items to be priced as Other Features are Basement Garages, Fireplaces, Finished Basements, Unfinished Areas and the applicable Miscellaneous Other Features. As for additions, the value of Other Features (including chimneys, fireplaces, and basement garages) is given in points (increments of \$100).

Step 5. - Flat Add Costs Determine if there are any "flat add" costs to be added.

Step 6. Subtotal the prices arrived at in Steps 1, 2, 3, 4, and 5.

Step 7. - Grade Factor Apply the proper Grade Factor. Refer to the "Estimating Replacement Cost New" Section 41 of this manual for an explanation of the application of grade factor, cost and design factor, and county index. The actual Mobile Home Grade Factors are in Section 43.1.2.

Step 8. - Cost and Design Apply the proper Cost and Design Factor. The resulting replacement cost new (RCN) is rounded to the nearest \$10.

Step 9. - Depreciation Apply the appropriate percent good to the RCN. Follow the instructions in Section 47 to calculate a percent good.

Step 10. - Economic Condition Factor Multiply by the local cost modifier and any economic condition factor. Round the resulting replacement cost new less depreciation (RCNLD) to the nearest \$10.

Step 11. - Percent Complete Multiply RCNLD by the percent complete.

Step 12. - Ownership Multiply by percent of ownership to arrive at final appraised value. Round the final result to the nearest \$10.

PART 4: REPLACEMENT COST

43.5. PRICING TABLES

43.5.1. MOBILE HOME RATES

LENGTH	SINGLE						DOUBLE					
	8	10	12	14	16	18	20	22	24	26	28	30
20	36.50	31.85	28.10	25.35	28.80	27.95	42.55	41.10	39.55	38.40	37.20	35.70
22	35.55	30.85	27.15	24.45	27.55	26.70	40.60	39.10	37.50	36.35	35.20	33.85
24	34.75	30.00	26.40	23.75	26.50	25.65	38.95	37.45	35.85	34.70	33.50	32.25
26	34.05	29.30	25.75	23.10	25.65	24.80	37.60	36.05	34.45	33.25	32.05	30.90
28	33.50	28.70	25.15	22.60	24.90	24.05	36.40	34.85	33.20	32.05	30.85	29.75
30	33.00	28.15	24.70	22.15	24.25	23.40	35.35	33.80	32.15	30.95	29.75	28.75
32	32.55	27.70	24.25	21.75	23.70	22.85	34.45	32.85	31.25	30.05	28.85	27.90
34	32.20	27.30	23.90	21.40	23.20	22.35	33.65	32.05	30.40	29.20	28.00	27.15
36	31.85	26.95	23.55	21.05	22.75	21.90	32.95	31.35	29.70	28.50	27.30	26.45
38	31.55	26.60	23.25	20.80	22.35	21.50	32.35	30.70	29.05	27.85	26.60	25.85
40	31.25	26.30	22.95	20.55	22.00	21.15	31.75	30.10	28.45	27.25	26.05	25.30
42	31.05	26.05	22.75	20.30	21.65	20.80	31.25	29.60	27.95	26.70	25.50	24.80
44	30.80	25.80	22.50	20.10	21.40	20.50	30.80	29.10	27.45	26.25	25.00	24.35
46	30.60	25.60	22.30	19.90	21.10	20.25	30.35	28.70	27.00	25.80	24.60	23.95
48	30.40	25.40	22.10	19.75	20.85	20.00	29.95	28.30	26.60	25.40	24.15	23.55
50	30.25	25.20	21.95	19.55	20.65	19.80	29.60	27.90	26.25	25.00	23.80	23.20
52	30.05	25.05	21.80	19.40	20.45	19.55	29.25	27.60	25.90	24.65	23.45	22.90
54	29.90	24.90	21.65	19.30	20.25	19.35	28.95	27.25	25.60	24.35	23.15	22.60
56	29.80	24.75	21.50	19.15	20.05	19.20	28.65	27.00	25.30	24.05	22.85	22.30
58	29.65	24.60	21.40	19.05	19.90	19.05	28.40	26.70	25.05	23.80	22.55	22.05
60	29.55	24.45	21.25	18.95	19.75	18.85	28.15	26.45	24.75	23.50	22.30	21.80
62	29.45	24.35	21.15	18.85	19.60	18.70	27.90	26.20	24.55	23.30	22.05	21.60
64	29.30	24.25	21.05	18.75	19.45	18.60	27.70	26.00	24.30	23.05	21.85	21.40
66	29.20	24.15	20.95	18.65	19.30	18.45	27.50	25.80	24.10	22.85	21.65	21.20
68	29.15	24.05	20.85	18.55	19.20	18.35	27.30	25.60	23.90	22.65	21.45	21.00
70	29.05	23.95	20.75	18.45	19.10	18.20	27.15	25.40	23.70	22.45	21.25	20.80
72	28.95	23.85	20.70	18.40	19.00	18.10	26.95	25.25	23.55	22.30	21.05	20.65
74	28.90	23.75	20.60	18.30	18.90	18.00	26.80	25.05	23.40	22.10	20.90	20.50
76	28.80	23.70	20.55	18.25	18.80	17.90	26.65	24.90	23.20	21.95	20.75	20.35
78	28.75	23.60	20.45	18.20	18.70	17.80	26.50	24.75	23.05	21.80	20.60	20.20
80	28.65	23.55	20.40	18.15	18.60	17.75	26.35	24.60	22.95	21.65	20.45	20.10
82	28.60	23.50	20.35	18.05	18.50	17.65	26.20	24.50	22.80	21.50	20.30	19.95
84	28.55	23.40	20.30	18.00	18.45	17.60	26.10	24.35	22.65	21.40	20.20	19.85
86	28.50	23.35	20.25	17.95	18.35	17.50	26.00	24.25	22.55	21.25	20.05	19.70
88	28.45	23.30	20.15	17.90	18.30	17.45	25.85	24.10	22.40	21.15	19.95	19.60
90	28.40	23.25	20.10	17.85	18.25	17.35	25.75	24.00	22.30	21.05	19.85	19.50

MHA - MOBILE HOME ADDITION
MET - EXPANDOS AND TIPOUTS

PRICE PER SQFT
27.00
15.65

43.5.2. HEATING AND AIR CONDITIONING ADJUSTMENTS

TOTAL HEATED OR LIVING AREA	NO HEAT (-)	NON-CENTRAL (-)	WITH AIR CONDITIONING
300	1120	600	890
400	1250	670	1000
500	1390	750	1110
600	1520	820	1210
700	1650	890	1320
800	1780	960	1430
900	1910	1040	1540
1000	2040	1110	1650
1100	2170	1180	1760
1200	2300	1260	1870
1300	2430	1330	1980
1400	2560	1400	2090
1500	2700	1480	2200
1600	2830	1550	2300
1700	2960	1620	2410
1800	3090	1690	2520
1900	3220	1770	2630
2000	3350	1840	2740
2100	3480	1910	2850
2200	3610	1990	2960
2300	3740	2060	3070
2400	3870	2130	3180
2500	4010	2210	3290
2600	4140	2280	3390
2700	4270	2350	3500

PART 4: REPLACEMENT COST

43.5.3. LIVING AREA ADDITIONS

AREA	FRAME OR CB			BRICK OR STONE			BSMT ADDN	UNFIN ATTIC ADDN	FIN ATTIC ADDN	AIR COND ADDN
	FIRST	FULL	HALF	FIRST	FULL	HALF				
10	3	2	1	3	2	1	0	0	0	0
20	5	4	2	6	4	3	1	0	1	0
30	8	6	4	9	6	4	1	1	1	0
40	11	8	5	11	9	5	2	1	2	0
50	13	10	6	14	11	6	2	1	2	0
60	16	12	7	17	13	8	2	1	3	1
70	19	14	8	20	15	9	3	2	3	1
80	22	16	10	23	17	10	3	2	4	1
90	24	18	11	26	19	12	4	2	4	1
100	27	20	12	29	21	13	4	2	5	1
110	30	22	13	31	23	14	5	3	5	1
120	32	24	14	34	26	15	5	3	6	1
130	35	26	16	37	28	17	5	3	6	1
140	38	28	17	40	30	18	6	3	7	1
150	40	30	18	43	32	19	6	4	7	1
160	43	32	19	46	34	21	7	4	8	1
170	46	33	20	49	36	22	7	4	8	2
180	48	35	22	51	38	23	7	4	9	2
190	51	37	23	54	40	25	8	5	9	2
200	54	39	24	57	43	26	8	5	10	2
210	56	41	25	60	45	27	9	5	10	2
220	59	43	26	63	47	28	9	5	11	2
230	62	45	28	66	49	30	9	6	11	2
240	65	47	29	69	51	31	10	6	12	2
250	67	49	30	72	53	32	10	6	12	2
260	70	51	31	74	55	34	11	6	13	2
270	73	53	32	77	58	35	11	6	13	2
280	75	55	34	80	60	36	11	7	14	3
290	78	57	35	83	62	37	12	7	14	3
300	81	59	36	86	64	39	12	7	15	3
310	83	61	37	89	66	40	13	7	15	3
320	86	63	38	92	68	41	13	8	16	3
330	89	65	40	94	70	43	14	8	16	3

44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

44. RESIDENTIAL & AGRICULTURAL OUTBUILDINGS

TABLE OF CONTENTS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE
44.1.	QUALITY GRADE SPECIFICATIONS	1	44.4.2.	LEAN-TOS	8
44.2.	MANUAL PRICING INSTRUCTIONS	2	44.4.3.	MILK HOUSES AND MILKING PARLORS	11
44.3.	RESIDENTIAL YARD ITEMS	3	44.4.4.	SWINE BARNs	12
44.3.1.	DETACHED GARAGES	3	44.4.5.	TANKS	13
44.3.2.	CARPORT / CANOPY	3	44.4.6.	SILOS	14
44.3.3.	PAVING	3	44.4.7.	POLE FRAME BUILDINGS AND SHEDS	17
44.3.4.	DETACHED RESIDENTIAL GREENHOUSES	4	44.4.8.	GRANARIES	18
44.3.5.	BOATHOUSES AND BOAT DOCKS	4	44.4.9.	IMPLEMENT SHEDS	18
44.3.6.	DECKs, PATIOS, STOOPS, GAZEBOs	5	44.4.10.	QUONSET BUILDINGS	18
44.3.7.	BARBECUE	5	44.4.11.	POULTRY HOUSES AND BARNs	21
44.3.8.	UTILITY BUILDINGS	5	44.4.12.	PRE-FABRICATED STEEL BUILDINGS	22
44.3.9.	FENCES	6	44.4.13.	STEEL GRAIN BINS	23
44.3.10.	RESIDENTIAL SWIMMING POOLS	6	44.4.14.	STEEL HOPPER BINS	23
44.3.11.	TENNIS COURTS	6	44.4.15.	POTATO STORAGE BUILDINGS	24
44.4.	AGRICULTURAL OTHER BUILDINGS AND YARD IMPROVEMENTS	7	44.4.16.	SLURRY SYSTEMS	24
44.4.1.	GENERAL PURPOSE BARNs	7	44.4.17.	FEED / FENCE BUNKS	24
			44.4.18.	SCALES	24

44.1. QUALITY GRADE SPECIFICATIONS

This section of the manual provides grade specifications, pictures, and costs for residential and agricultural other buildings and yard improvements.

The pictures and grade specifications are incorporated where possible on the same or facing pages as the pricing tables so that you will be able to find all of the information regarding a particular structure in one place.

Two grading systems are used.

For residential (dwelling-related) structures the same numerical grade system (1-8) that is applied to dwellings is used.

The grade factors that are applied will be the same as those used for dwellings.

For other structures, including all agricultural buildings, an alphabetical grading scale with a

range of grades from a low of C (cheap construction) to a high of E (excellent construction) is used. Not all structures permit the use of all grades. Be sure to review the allowable grades for the structure being coded. The relative value range of all grades is indicated by the following table.

<u>Grade</u>	<u>Value Range</u>
C - Cheap	.50
L - Low Cost	.78
A - Average	1.00
G - Good	1.26
E - Excellent	1.55

If there is an exception to this rule, it will be noted on the page describing the structure type.

44.2. MANUAL PRICING INSTRUCTIONS

The pricing schedules for Other Buildings and Yard Improvements show costs for a selected set of sizes of the item, or rates of selected sizes. The tables cover the range of sizes which are expected. To arrive at a Replacement Cost New Less Depreciation, the value will have to be adjusted for any grade factor differential and depreciated according to the item's age, condition, and expected life, using the following procedure.

1. Determine the unit of measurement to be used, whether it is per square foot, cubic foot, bushel, per unit, etc.
2. Calculate the number of units of the item. For example, if the unit of measurement is square feet and the dimensions are given, multiply the dimensions to arrive at the area of square feet.
3.
 - a. If using tables which show total cost, find the entry in the table nearest to, *but not exceeding*, the number found in Step 2. Any remaining units may be interpolated by the fraction of its value to the next entry in the table. For example, if the area of the item is 348 square feet and the entries in the table are at 20-square-foot intervals, the cost value is equal to the value at 340 square feet plus 40% (i.e., 8/20) of the price difference between the 340-square-foot and 360-square-foot costs.
 - b. If the table shows a unit value (such as square foot rate), use the rate nearest the size found in Step 2.
4. If codes for modifications have been entered, use the rate shown for the modification and add it to the cost determined in Step 3. If the modification cost is applied on a per-unit of area or volume basis, multiply the rate by the number of units found in Step 2 and add to the cost determined in Step 3.
5. Apply the proper grade factor, if necessary. The grade factors used for the item are indicated in the tables. The basic cost (100%) applies to average quality (Grade 5-Residential or Grade A-Agricultural) items. Multiply the cost found in Step 4 by the grade correction factor to arrive at Replacement Cost New (RCN).
6. Find the percent good for the item. If a manually determined override percent good has been entered, proceed to Step 7. Otherwise, find the expected life for the item, shown in the Residential and Agricultural Depreciation Schedules section. In the depreciation table for this expected life, find the percent good for the item's age and condition.
7. Multiply the RCN found in Step 5 by the percent good determined in Step 6.
8. Multiply the result of Step 7 by the County cost index multiplier to arrive at the Replacement Cost New Less Depreciation (RCNLD). Round the resulting value to the nearest one hundred dollars (\$100).

NOTE: There may be some small differences in the cost generated using the manual procedure and those produced by the computer. This is the result of using formulas rather than tables and also some different rounding procedures in the computer. The difference should not be interpreted as an error in either of the calculations.

44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

44.3. RESIDENTIAL YARD ITEMS

44.3.1. DETACHED GARAGES

AREA	RG1 FRAME FINISHED	RG2 MASONRY FINISHED	RG3 FRAME UNFINISHED	RG4 MASONRY UNFINISHED
160	23.15	37.95	19.40	34.20
180	21.55	35.10	18.00	31.55
200	20.30	32.85	16.85	29.40
220	19.30	31.00	15.95	27.65
240	18.45	29.45	15.15	26.20
260	17.70	28.15	14.50	25.00
280	17.10	27.05	13.95	23.95
300	16.55	26.10	13.50	23.00
320	16.10	25.25	13.05	22.20
340	15.65	24.50	12.70	21.50
360	15.30	23.80	12.35	20.90
380	14.95	23.25	12.05	20.30
400	14.65	22.70	11.80	19.80
420	14.40	22.20	11.55	19.35
440	14.15	21.75	11.35	18.95
460	13.95	21.35	11.15	18.55
480	13.75	21.00	10.95	18.20
500	13.55	20.65	10.80	17.90
550	13.15	19.90	10.40	17.20
600	12.80	19.30	10.10	16.60
650	12.50	18.80	9.85	16.15
700	12.25	18.35	9.65	15.70
800	11.85	17.60	9.25	15.00
900	11.55	17.05	9.00	14.50
1000	11.30	16.60	8.75	14.05
1100	11.10	16.20	8.60	13.70
1200	10.90	15.90	8.40	13.40

Modification Codes:

1	Earth Floor	-1.50
2	No Electricity	- .60
3	Insulation	.50
4	Heating	1.00
5	Electric Door Opener	300.00

Specifications:

See Sections 42.2.1. thru 42.2.8. Quality Grade Specifications for Dwelling Garage.

44.3.2. CARPORT / CANOPY

	RC1 OPEN FR/MTL	RC2 OPEN FR/MTL
PRICE PSF	5.00	5.00

Modification Codes:

1	Earth Floor	-1.50
2	Electricity	.60

Specifications:

Permissible grades are 3-7. The specifications for 3, 5, and 7 are provided as guidelines for the difference in base specifications.

GRADE 3

Frame:	Low cost wood or metal post. (May be prefab.)
Roof:	Shed type, typically corrugated fiberglass, sheet metal or roll composition.
Other Features:	Earth or gravel.

GRADE 5

Frame:	Average quality wood or metal post.
Roof:	Asphalt shingles on wood joist and decking; ceiling.
Floor:	Asphalt or concrete on grade.
Other Features:	Minimal electrical service.

GRADE 7

Frame:	Good quality wood, metal or masonry posts; may include wainscot or railing.
Roof:	Asphalt or wood shingles, clay tile or slate on wood joist and decking; ceiling.
Floor:	Reinforced concrete.
Other Features:	Adequate lighting.

44.3.3. PAVING

AREA	PA1 ASPHALT	PA2 CONCRETE
500	1.26	2.35
1000	1.10	2.10
2000	0.99	1.93
3000	0.94	1.85
5000	0.89	1.77
10000	0.84	1.69
15000	0.82	1.66
25000	0.80	1.63

PART 4: REPLACEMENT COST

44.3.4. DETACHED RESIDENTIAL GREENHOUSES

AREA	GH1 PLASTIC	GH2 WOOD FR	GH3 METAL PIPE
40	28.50	37.95	57.05
50	25.95	34.55	51.90
60	24.05	32.05	48.15
70	22.65	30.10	45.25
80	21.45	28.60	42.95
90	20.50	27.35	41.05
100	19.70	26.25	39.45
110	19.05	25.35	38.10
120	18.45	24.55	36.90
140	17.45	23.25	34.90
160	16.65	22.20	33.35
180	16.00	21.35	32.05
200	15.45	20.60	30.95
220	15.00	20.00	30.00
240	14.60	19.45	29.15
260	14.25	18.95	28.45
280	13.90	18.55	27.80
300	13.60	18.15	27.25
340	13.10	17.50	26.25
380	12.70	16.95	25.40
420	12.35	16.50	24.70
460	12.05	16.05	24.10
500	11.80	15.70	23.60
520	11.65	15.55	23.35
550	11.50	15.35	23.00
600	11.25	15.00	22.50
650	11.00	14.70	22.05
700	10.85	14.45	21.65
800	10.50	14.00	20.95
1000	9.95	13.30	19.95

Specifications:

- GH1 Wood Frame, plastic covered
Use the same specifications as GH2 except the walls are plastic.
- GH2 Wood Frame, glass walls
- Grade L: Low continuous wall foundation; standard glazed glass; low quality wood frame with door; earth floor, minimal ventilation and electrical service.
- Grade A: Continuous wall foundation; double pane or standard glazed glass; average quality wood frame with end wall doors; gravel or earth floor; adequate ventilation, electrical and water service.
- Grade G: Continuous wall foundation; tempered or laminated double or triple pane glass; good quality wood frame with end wall doors; concrete floor or walks; good ventilation, electrical and water service.
- GH3 Pipe / Metal Frame
- Grade L: Low continuous wall foundation; standard glazed glass; low cost aluminum or pipe frame with door; earth floor, minimal ventilation and electrical service.
- Grade A: Continuous wall foundation; standard, double or triple pane glass; average steel frame with end wall doors; gravel or earth floor; adequate ventilation, electrical and water service.
- Grade G: Continuous wall foundation; tempered or laminated double or triple pane glass; anodized metal or tubular frame with end wall doors; concrete floor or walks; good ventilation, electrical and water service.

Modification Code:

1 Earth Floor -1.50

44.3.5. BOATHOUSES AND BOAT DOCKS

BOATHOUSES		BOAT DOCKS		
BB1 FRAME	BB2 MASONRY	BD1 LIGHT	BD2 MEDIUM	BD3 HEAVY
7.05	9.30	12.45	18.70	31.15

Specifications:

BB1 Frame or Concrete Block

- Grade L: Continuous wall foundation; low quality siding on rough wood frame; sheet metal or roll roofing on wood joist and decking; one side open.
- Grade A: Continuous wall foundation; average quality wood siding on wood frame; asphalt shingles on wood joist and decking; minimal electrical service; garage type door to water level.
- Grade G: Continuous wall foundation; good quality siding on dimensioned wood frame; good quality asphalt or wood shingles on wood joist and decking; adequate electrical service; garage type door to water level.

BB2 Masonry

- Grade L: Continuous wall foundation; concrete block walls; unfinished interior, single pitch roof with sheet metal or roll roofing; one side open.
- Grade A: Continuous wall foundation; concrete block walls; unfinished interior; double pitched roof with asphalt shingles on wood joist and decking; minimal electrical service; garage type door to water level.
- Grade G: Continuous wall foundation; concrete block with stucco exterior walls; painted interior with ceiling; double pitched roof with good quality asphalt or wood shingles on wood joist and decking; adequate electrical service; garage type door to water level.

BD1 Light wood deck, light posts.

BD2 Medium wood deck, wood girders.

BD3 Heavy wood deck, heavy pilings.

44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

44.3.6. DECKS, PATIOS, STOOPS, GAZEBOS

AREA	RT1 WOOD DECK	RT2 CONC/MAS DECK/PATIO	RT3 STONE/TILE DECK/PATIO SAND BASE	RT4 STONE/TILE DECK/PATIO CONC BASE	RT5 BRICK DECK/PATIO	RT6 MAS STOOP TERRACE	RT7 PATIO COVERED	RZ1 GAZEBO
30	11.35	2.55	6.80	8.50	3.95	9.00	7.50	10.95
50	8.20	2.30	6.10	7.60	3.55	8.20	7.26	10.95
70	6.80	2.15	5.70	7.10	3.30	7.75	7.12	10.95
100	5.70	2.00	5.35	6.65	3.10	7.40	6.99	10.95
150	4.80	1.90	5.00	6.25	2.90	7.05	6.86	10.95
200	4.35	1.80	4.80	6.00	2.80	6.80	6.79	10.95
300	3.85	1.70	4.60	5.75	2.65	6.55	6.70	10.95
500	3.40	1.65	4.35	5.45	2.55	6.30	6.62	10.95

Specifications:

STRUCTURE CODE	GRADE	DESCRIPTION
RT1	A	Average quality redwood or pressure treated softwood; includes handrails and steps.
RT2	A	Non-reinforced concrete or pre-cast 2" thick concrete blocks.
RT3	A	Tile, flagstone, or slate on sand base.
RT4	A	Tile, flagstone, or slate on concrete base.
RT5	A	Brick on sand bed, epoxy with stone, or concrete with stamped pattern finish.
RT6	A	Raised concrete slab on continuous wall perimeter foundation with steps; no roof.
RT7	A	Covered concrete or masonry patio.
RZ1	A	Average quality wood framing, wood deck, with rails and roof.

44.3.7. BARBECUE (BQ1)

400.00 Each

44.3.8. UTILITY BUILDINGS

AREA	RS1 FRAME	RS2 METAL	RS3 MASONRY
25	11.35	11.35	14.15
50	8.75	8.75	11.55
75	7.60	7.60	10.40
100	6.90	6.90	9.70
150	6.10	6.10	8.90
200	5.60	5.60	8.40
300	5.00	5.00	7.80
500	4.45	4.45	7.25

Specifications:

GRADE	DESCRIPTION
L	Low quality construction; used materials; earth floor.
A	Average quality construction; 6-8 foot wall height; concrete or plank floor; unfinished interior.
G	Good quality construction; concrete footings; few windows; concrete floor; finished interior; electric lighting.

Modification Codes:

1	Earth Floor	-1.50
2	Concrete Floor	1.50
3	Insulation	.50
4	Heating	1.00
5	Electricity per S.F.	.60

PART 4: REPLACEMENT COST

44.3.9. FENCES (PER LINEAL OR SQUARE FOOT)

TYPE	HEIGHT (FEET), IF APPLICABLE				
	3	4	5	6	8
RF1 Chain Link	3.95	5.10	6.25	7.40	9.70
RF2 Picket	6.50	8.00	9.50	11.00	14.00
RF3 Stockade	3.75	5.00	6.25	7.50	10.00
RF4 Post and Rail	4.25	5.00	5.75	----	----
RF5 Basketweave	----	----	9.75	10.50	12.00
RF6 Brick or Mason.			5.00	per square foot	
RF7 Orn. Iron			5.00	per square foot	
RF8 Barbed Wire			1.90	per lineal foot	

44.3.10. RESIDENTIAL SWIMMING POOLS

BASE PRICE: Includes basic pool structure, filter and pump equipment, all plumbing, drains, and a minimum 3' perimeter concrete walkway.

RP1 VINYL LINER POOL - Vinyl liner, sand hopper bottom, galvanized steel walls or equal.

SIZE	AREA	RATE	COST
12 X 27	324	19.25	6,240
16 X 32	512	14.90	7,630
18 X 36	648	13.30	8,620
20 X 40	800	12.20	9,760

RP4 GUNITE POOL - Gunite sprayed steel walls and bottom.

SIZE	AREA	RATE	COST
12 X 27	324	28.50	9,230
16 X 32	512	24.95	12,770
18 X 36	648	23.55	15,260
20 X 40	800	22.45	17,960

RP2 FIBERGLASS POOL - 1/4" rigid fiberglass self-supporting pool.

SIZE	AREA	RATE	COST
12 X 27	324	26.35	8,540
16 X 32	512	20.75	10,620
18 X 36	648	18.50	11,990
20 X 40	800	16.70	13,360

Pool Modification Codes:

1	No filter	-1,170.
2	Gas heater	940.
3	Electric heating	2,060.
4	Solar heat (psf)	1.95 SqFt
5	Diving board	400. Each
6	Ladder	160. Each
7	Underwater Lights	150. Each

RP3 CONCRETE POOL - good quality poured concrete walls and bottom.

SIZE	AREA	RATE	COST
12 X 27	324	24.30	7,870
16 X 32	512	19.25	9,860
18 X 36	648	17.10	11,080
20 X 40	800	15.45	12,360

HT1 HOT TUB

2,500 Each

44.3.11. TENNIS COURTS

TC1	Asphalt	15,620
TC2	Concrete	18,780
TC3	Clay	10,960

Modification Codes:

1	Lighting	4,500
2	Fencing	3,500

44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

44.4. AGRICULTURAL OTHER BUILDINGS AND YARD IMPROVEMENTS

44.4.1. GENERAL PURPOSE BARNs

AREA	AB1 BANK BARN	AB2 STANDARD BARN	AD1 HORSE BARN
800	18.50	8.80	25.25
1000	17.05	8.35	23.75
1200	16.10	8.05	22.65
1400	15.45	7.75	21.80
1600	14.90	7.55	21.10
1800	14.55	7.40	20.55
2000	14.20	7.25	20.05
2200	13.95	7.10	19.65
2400	13.75	7.00	19.30
2600	13.55	6.90	18.95
2800	13.40	6.80	18.70
3000	13.25	6.75	18.40
3200	13.15	6.70	18.20
3400	13.05	6.60	18.00
3600	12.95	6.55	17.80
3800	12.85	6.50	17.60
4000	12.75	6.45	17.45
4500	12.60	6.35	17.10
5000	12.50	6.25	16.80
5500	12.40	6.15	16.50
6000	12.30	6.10	16.30
6500	12.20	6.05	16.10
7000	12.15	6.00	15.90
7500	12.10	5.95	15.75
8000	12.05	5.90	15.60
8500	12.00	5.85	15.45
9000	12.00	5.80	15.35
9500	11.95	5.80	15.20
10000	11.90	5.75	15.10

BANK BARNs - identified as having a basement, with entrances provided at the basement and first floor level. These barns are typically built into a hillside.

STANDARD BARNs - identified as having an entrance on only one level, the ground floor.

Modification Codes:

Bank / Standard Barns		
1	Earth Floor	-1.50
2	No Lighting	-0.60
3	Stalls and Partitions	0.30
4	Wood Loft Floor	1.50
5	Gambrel / Arched Roof	1.10
Horse Barn / Stable		
1	Earth Floor	-1.50
2	No Lighting	-0.60
3	Insulation	0.30
4	Heating	0.60

PART 4: REPLACEMENT COST

44.4.1. GENERAL PURPOSE BARNs (Cont'd)

Specifications:

C GRADE

Foundation: Concrete walls and footings.
Exterior Walls: Low cost wood or metal siding on light wood frame.
Interior: Unfinished; few to no stalls.
Floors: First, concrete; Upper, low cost wood on wood joist.
Roof: Roll composition or light metal on low cost wood decking and light wood frame.
Other Features: None.

L GRADE

Foundation: Concrete walls and footings.
Exterior Walls: Low cost wood or metal siding on light wood or steel frame.
Interior: Unfinished; few stalls.
Floors: First, concrete; Upper, wood on wood joist.
Roof: Roll composition or light metal on wood decking on wood or light steel framing.
Other Features: Minimal lighting.

A GRADE

Foundation: Concrete walls and footings.
Exterior Walls: Wood or metal siding on wood or steel frame; adequate windows, service doors, and equipment access doors.
Interior: Unfinished; some stalls, feed rooms.
Floors: First, concrete; Upper, wood on wood joist, timber or steel beams and columns.
Other Features: Adequate electrical and water service; wood feed bunk.

G GRADE

Foundation: Concrete walls and footings.
Exterior Walls: Concrete block; good quality wood or metal siding; good quality wood or metal frame, normal windows, service doors, and equipment access doors.
Interior: Some wainscot, stalls; feed room.
Floors: First, concrete; Upper, wood on wood joist, timber or steel beams and columns.
Roof: Good quality asphalt or wood shingles on wood decking; heavy wood or steel frame.
Other Features: Good electrical service with normal fixtures and outlets; water service; barn gutter cleaner; concrete feed bunk; mechanical feeder.

E GRADE

Foundation: Concrete walls and footings.
Exterior Walls: Brick or brick on block; best quality wood metal siding, or brick veneer on heavy wood frame. Numerous good quality windows, service doors and equipment access doors.
Interior: Painted; good quality stalls. Stable ceiling, tongue and groove wainscot. Feed room.
Floors: First, concrete; Upper, wood on wood joist, Timber or steel beams and columns.
Roof: Best quality asphalt, wood shingles, or clay tile on wood decking. Heavy wood or steel frame.
Other Features: Good electrical service with numerous fixtures and outlets; good water service; barn gutter cleaner; concrete feed bunk, mechanical feeder; restroom.

44.4.2. LEAN-TOS

AL1 1-Story 4.00 SqFt

Modification Codes:

1	Earth Floor	-1.50
2	Lighting	0.60
3	Insulation	0.30

44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

GENERAL PURPOSE BARN



GOOD BARN



AVERAGE BARN

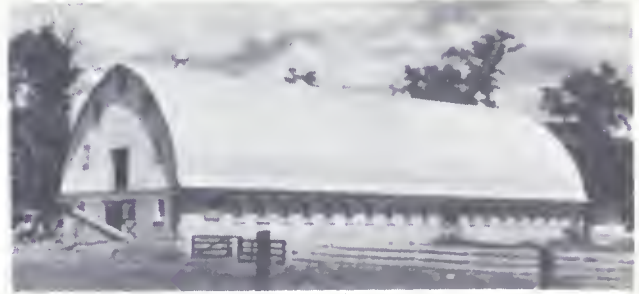


LOW COST BARN

SPECIAL PURPOSE DAIRY AND HORSE BARN



GOOD



GOOD

GENERAL PURPOSE BANK BARN



AVERAGE



LOW COST

MILK HOUSES AND MILKING PARLORS



SWINE FARROWING BARN



SWINE FINISHING / CONFINEMENT BARN



44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

44.4.3. MILK HOUSES AND MILKING PARLORS

AREA	MILK HOUSES				MILKING PARLORS	
	ATTACHED		DETACHED			
	AM1 CB/FR.	AM2 TILE	AM3 CB/FR.	AM4 TILE	AM5 CB/FR.	AM6 TILE
200	20.65	25.20	23.75	28.40	30.30	31.45
300	16.65	22.45	19.00	24.85	25.15	26.85
400	14.55	21.00	16.50	23.00	22.45	24.25
500	13.25	20.10	14.90	21.80	20.75	22.55
600	12.35	19.50	13.85	21.00	19.55	21.30
700	11.70	19.00	13.05	20.35	18.70	20.35
800	11.15	18.65	12.45	19.90	18.05	19.65
900	10.75	18.40	11.95	19.50	17.50	19.00
1000	10.45	18.15	11.55	19.20	17.05	18.50
1200	9.90	17.80	10.90	18.75	16.40	17.70

Modification Codes:

1	Metal Roof	.75
2	Wood Shingle Roof	.65
3	Composition Roof	-.65
4	No Heating	-2.15

Specifications:

L GRADE

Foundation: Concrete walls and footing.
 Exterior Walls: Concrete block; wood or light steel siding; light wood or steel frame.
 Interior: Minimal finish.
 Floors: Concrete.
 Roof: Double or single pitch with low cost asphalt shingles on wood decking; light wood or steel frame.
 Other Features: Minimal electrical service and plumbing; wood stanchions, milk piping.

A GRADE

Foundation: Concrete walls and footings.
 Exterior Walls: Concrete block; wood or steel siding; wood or steel frame; wood or steel sash windows.
 Interior: Plaster wainscot.
 Floors: Concrete; drains.
 Roof: Double pitch with asphalt shingles on wood decking; wood or steel frame.
 Other Features: Adequate electrical service and plumbing; pipe stanchions, milk piping; exhaust fan; unit heater; water heater.

G GRADE

Foundation: Concrete walls and footings.
 Exterior Walls: Glazed tile or concrete block; good quality wood or steel frame; insulated; good quality wood or steel sash windows.
 Interior: Plaster and ceiling; tile wainscot.
 Floors: Tile on concrete; drains.
 Roof: Double pitch with good quality asphalt shingles on wood decking; wood or steel frame; insulated.
 Other Features: Good electrical service with normal fixtures and outlets; good plumbing; pipe stanchions; milk piping; exhaust fans, unit heaters; water heaters.

E GRADE

Foundation: Concrete walls and footings.
 Exterior Walls: Brick, glazed tile, or stucco on block; best quality steel siding on steel frame; insulated; numerous excellent quality wood or steel sash windows.
 Interior: Ceramic or epoxy finish; plaster ceilings.
 Floor: Tile on concrete; drains.
 Roof: Double pitch; best quality asphalt shingles on wood decking; wood or steel frame; insulated.
 Other Features: Good electrical service with numerous fixtures and outlets; good quality plumbing; cow wash; restroom and shower; pipe stanchions; milk piping; exhaust fans; unit heater; water heater.

44.4.4. SWINE BARNs

AREA	AW1 SWINE FARROWING	AW2 SWINE FINISHING	AW3 SWINE CONFINEMENT
200	18.85	19.75	20.60
300	15.30	14.75	15.65
400	13.50	12.25	13.15
500	12.40	10.75	11.65
600	11.70	9.75	10.65
700	11.20	9.05	9.90
800	10.80	8.50	9.40
1000	10.25	7.75	8.65
2000	9.20	6.25	7.15
3000	8.80	5.75	6.65
4000	8.65	5.50	6.40
5000	8.55	5.35	6.20
6000	8.45	5.25	6.10
7000	8.40	5.20	6.05
8000	8.35	5.15	6.00
9000	8.35	5.10	5.95
10000	8.30	5.05	5.90

Modification Codes:

1	25% concrete pit area	1.50
2	100% concrete pit area	3.25

Special Modification Codes:

FW1	Wood Pens	9.72 LnFt
FW2	Steel Pens	22.14 LnFt
FW3	Fans	530.00 Each
FW4	Waterers	151.00 Each
FW5	Feeders	34.00 LnFt
FW6	Stalls	146.00 Each

Specifications:

C GRADE

Foundation:	None.
Frame:	Earth.
Exterior Walls:	Low quality wood or sheet metal.
Interior:	Unfinished.
Floor:	Dirt.
Other Features:	None.

L GRADE

Foundation:	Piers.
Frame:	Low quality wood.
Exterior Walls:	Vertical boards or plywood, no insulation.
Interior:	Unfinished.
Floor:	Plank or plywood.
Other Features:	Minimum lighting and water service.

A GRADE

Foundation:	Continuous wall.
Frame:	Concrete block or average quality wood.
Exterior Walls:	Concrete block, metal, stucco or wood siding, insulated, little ventilation.
Interior:	Insulated ceiling, plywood finish, some division of space.
Floor:	Concrete.
Other Features:	Adequate lighting and water service.

G GRADE

Foundation:	Continuous wall.
Frame:	Masonry, light steel, or good quality wood.
Exterior Walls:	Block, structural tile, steel panels, or good quality wood siding. Fully insulated, adequate ventilation.
Interior:	Insulated ceiling, average sheathing, adequate wood or steel stalls.
Roof:	Commercial weight sheet metal or asphalt shingles.
Floor:	Reinforced concrete.
Other Features:	Good lighting and water service.

E GRADE

Foundation:	Continuous wall.
Frame:	Masonry, steel or good quality wood.
Exterior Walls:	Brick, fully insulated steel panels, or very good quality wood siding, draft free ventilation.
Interior:	Insulated ceiling, sheathing, good grade wood or steel stalls.
Roof:	Surface treated metal or asphalt shingles on wood joists and decking.
Floor:	Reinforced concrete.
Other Features:	Good lighting, automated feeding and watering systems, temperature controlled environment.

44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

44.4.5. TANKS

CAPACITY (GALLONS)	AU1 UNDERGROUND FUEL TANKS	AU2 ABOVE GROUND FUEL TANKS	AU3 HORIZONTAL PRESSURE
500	1.76	6.29	2.03
750	1.38	5.13	1.86
1,000	1.19	4.45	1.78
1,500	1.00	3.63	1.70
2,000	0.90	3.14	1.66
3,000	0.81	2.57	1.62
4,000	0.76	2.22	1.60
5,000	0.73	1.99	1.58
7,500	0.69	1.62	1.57
10,000	0.67	1.41	1.56
15,000	0.65	1.15	1.55
20,000	0.64	0.99	1.55
30,000	0.63	0.81	1.54
50,000	0.63	0.63	1.54

PART 4: REPLACEMENT COST

44.4.6. SILOS

CONCRETE STAVE SILOS

DIA	HEIGHT	AS1 WITH ROOF	AS2 WITHOUT ROOF
		COST	COST
10	30	3,940	3,510
10	35	4,460	4,020
10	40	4,970	4,540
12	30	4,750	4,130
12	40	5,980	5,360
12	50	7,210	6,590
14	40	7,020	6,180
14	50	8,460	7,610
16	30	6,460	5,360
16	40	8,100	7,000
16	50	9,750	8,640
16	60	11,390	10,280
18	50	11,070	9,670
18	60	12,910	11,510
18	70	14,760	13,360
20	40	10,370	8,640
20	50	12,420	10,690
20	60	14,470	12,740
20	70	16,520	14,800
24	40	12,770	10,280
24	50	15,230	12,740
24	60	17,690	15,210
24	70	20,160	17,670

Cost includes foundation and erection.

BUTLER LMS* SILOS

DIA	HEIGHT	AS3 COST
24	59	50,060
24	69	56,470
27	59	58,050
30	59	66,420
36	59	84,310
36	69	93,920

Cost includes foundation and erection.

* Low Moisture Silage

PORCELAIN SILOS

DIA	HEIGHT	MODEL	AS4 COST
14	40	----	19,440
17	40	SA03	24,010
17	50	SA03	29,430
20	40	SA03	28,720
20	50	SA03	35,110
20	60	SA06	41,490
20	70	SA06	47,870
20	20	SA14	15,960
20	25	SA14	19,150
20	30	SA14	22,340
20	22	SA15	17,240
20	27	SA15	20,430
25	65	SA09	56,850
25	80	SA09	68,810

Cost includes foundation and erection.

PREFABRICATED STEEL SILOS

DIA	HEIGHT	AS5 PREFAB STEEL	AS6 HIGH MOIST. STORAGE
		COST	COST
11.5	20	3,880	4,850
11.5	30	5,370	6,720
11.5	40	6,870	8,590
13.42	20	4,500	5,630
13.42	30	6,250	7,810
13.42	40	7,990	10,000
15.33	20	5,140	6,440
15.33	30	7,140	8,930
15.33	40	9,130	11,420
17.25	20	5,810	7,270
17.25	30	8,050	10,070
17.25	40	10,300	12,880
20	30	9,400	11,760
20	40	12,000	15,010
20	50	14,600	18,260
24	30	11,420	14,300
24	40	14,550	18,200
24	50	17,670	22,100

Cost includes foundation and erection.

Modification Codes:

1	17' Automatic Unloader	9,200
2	20' Automatic Unloader	9,310
3	25' Automatic Unloader	13,050
4	17' Raised Arm Auger	3,270
5	20' Raised Arm Auger	3,520
6	25' Raised Arm Auger	3,780

SILOS



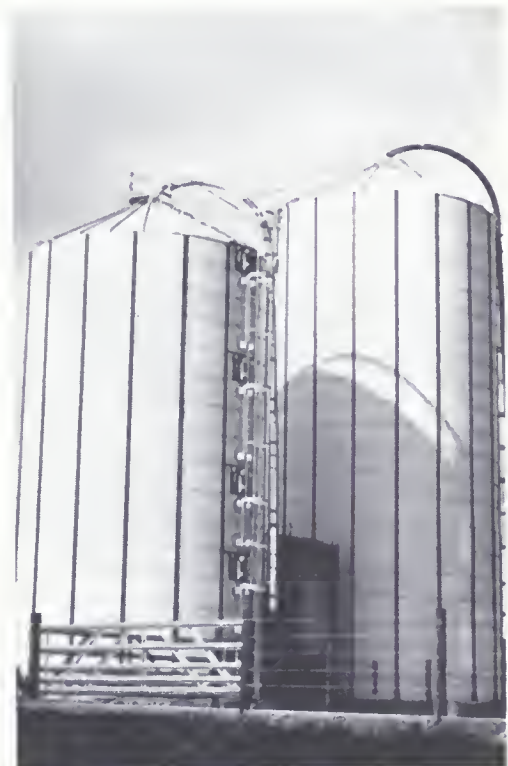
CONCRETE STAVE SILOS



PORCELAIN SILOS



BUTLER LMS SILOS

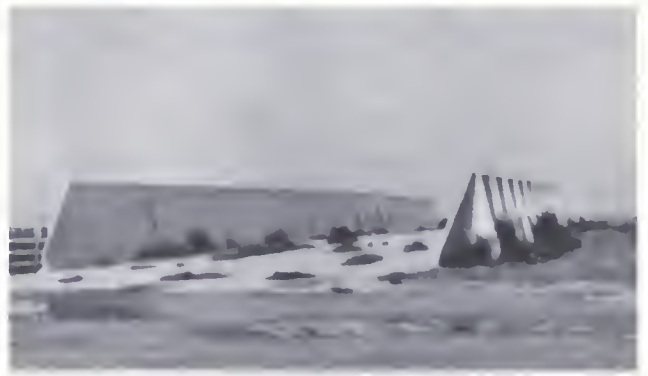


PREFABRICATED STEEL SILOS

SILOS



TRENCH SILOS



BUNKER SILOS

POLE FRAME BUILDINGS AND SHEDS



44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

TRENCH SILOS

BASE PRICES PER LINEAL FOOT - 30' WIDE

TRENCH DEPTH	AT1 CONC. OR PLANK	AT2 DIRT
10	116.00	36.00
12	135.00	41.75
16	172.75	53.50
20	210.50	65.00
25	257.75	79.75
30	305.00	94.25

Modification Codes:

1	20 ft. wide	-29.00	-13.00
2	40 ft. wide	25.00	12.00
3	50 ft. wide	49.00	25.00
4	60 ft. wide	69.00	37.00
5	80 ft. wide	108.00	61.00

Specifications:

Treated Plank or Concrete Floor and Side Walls. Normally Below Ground Level. B Grade (AT1 only) can be used to distinguish all concrete (walls and floor) from plywood walls and concrete floor construction.

BUNKER SILOS

BASE PRICES PER LINEAL FOOT - 30' WIDE

WALL HEIGHT	AK1
8	101.50
10	113.50
12	125.25
16	149.00
20	172.75
25	202.50

Modification Codes:

1	20 ft. wide	-17.00
2	40 ft. wide	11.00
3	50 ft. wide	22.00
4	60 ft. wide	31.00
5	80 ft. wide	47.00

Specifications:

Treated Plank Side Walls with Open Ends. Usually Above Ground level with a concrete Floor on Grade.

44.4.7. POLE FRAME BUILDINGS AND SHEDS

BASE PRICES - PER SQUARE FOOT - 36' SPAN

AREA	FOUR SIDES CLOSED		ONE SIDE OPEN		FOUR SIDES OPEN	
	AP1 METAL	AP2 WOOD	AP3 METAL	AP4 WOOD	AP5 METAL	AP6 WOOD
600	6.45	7.05	5.75	6.15	4.15	4.75
1000	5.25	5.65	4.65	4.95	3.50	3.95
1400	4.65	5.00	4.15	4.40	3.20	3.50
2000	4.15	4.45	3.75	4.00	2.90	3.15
3000	3.75	4.00	3.45	3.60	2.65	2.80
4000	3.50	3.75	3.25	3.40	2.50	2.55

Modification Codes:

1	Concrete Floor	1.50
2	No Electricity	- 0.60
3	Insulation	0.30
4	Wood Lining	0.80
5	Truss Span to 50'	0.25
6	Enameled Steel	0.30

Specifications:

L GRADE

Low cost construction, light metal or low grade wood siding on wood frame. No electrical or water service.

A GRADE

Average quality construction, metal or wood siding on wood frame. Minimal electrical and water service.

G GRADE

Good quality construction, surface treated commercial grade metal or good grade dimensioned wood siding on heavy wood frame. Adequate electrical and water service.

PART 4: REPLACEMENT COST

44.4.8. GRANARIES

AREA	AR1
400	13.45
500	12.30
600	11.50
700	10.85
800	10.40
900	10.00
1000	9.70
1200	9.20
1400	8.85
1600	8.55
1800	8.35
2000	8.15

Modification Codes:

1	Wood Storage Bins	2.20
2	Metal Walls	0.50
3	Metal Roof	0.15
4	Wood Ventilation Ducts	1.10
5	No Lighting	-0.60
6	Pier Foundation	-0.80

Specifications:

Foundation: Concrete walls and footings.
Walls: Drop Siding. Interior 1" x 4" Wood Crib Siding.
Floor: Concrete, Loft Pine on Wood Joist.
Roof: Double Pitch, Shingle on Wood Decking.
Other Features: Electric Lighting.

44.4.10. QUONSET BUILDINGS

AREA	AQ1
800	9.35
900	8.95
1000	8.60
1200	8.05
1400	7.60
1600	7.30
1800	7.00
2000	6.80
2400	6.45
2800	6.20
3200	5.95
3600	5.80
4000	5.65
4500	5.50
5000	5.40
6000	5.20
7000	5.05
8000	4.90
10000	4.75

Modification Codes:

1	Earth Floor	-1.50
2	No Lighting	-0.60
3	Insulation	0.30
4	Heating	0.60
5	Grain Package	*1.70

Specifications:

L GRADE

Concrete footings, low cost metal siding on light wood frame.

A GRADE

Continuous wall foundation, average metal siding on wood frame, adequate equipment, pedestrian doors.

G GRADE

Continuous wall foundation, heavy steel (no frame), adequate equipment and pedestrian doors.

44.4.9. IMPLEMENT SHEDS

AREA	AI1 WOOD FRM	AI2 CONC BLCK
200	10.70	16.80
300	9.80	15.35
400	9.25	14.50
500	8.90	13.90
600	8.60	13.50
700	8.40	13.15
800	8.20	12.90
900	8.10	12.65
1000	7.95	12.50
1200	7.75	12.20
1500	7.55	11.85
2000	7.30	11.45
2500	7.15	11.20
3000	7.05	11.00
4000	6.85	10.75
5000	6.75	10.55

Modification Codes:

1	Concrete Floor	1.50
2	Lighting	-0.60
3	Insulation	0.30
4	Heating	0.60
5	Enameled Steel	0.40

GRANARIES



QUONSET BUILDINGS



IMPLEMENT SHEDS



POULTRY HOUSES AND BARNES



PREFABRICATED STEEL BUILDINGS



44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

44.4.11. POULTRY HOUSES AND BARNs

AREA	FRAME OR METAL			CONCRETE BLOCK		
	AH1 ONE STORY	AH2 TWO STORY	AH3 THREE STORY	AH4 ONE STORY	AH5 TWO STORY	AH6 THREE STORY
200	11.00	17.20	23.50	14.30	22.40	30.55
400	8.75	13.65	18.60	11.05	16.95	22.85
600	7.75	12.15	16.55	9.65	14.75	19.80
800	7.20	11.25	15.35	8.80	13.45	18.15
1000	6.75	10.65	14.50	8.20	12.65	17.05
1200	6.50	10.20	13.95	7.80	12.05	16.25
1400	6.25	9.85	13.50	7.45	11.55	15.65
1600	6.05	9.60	13.10	7.20	11.20	15.20
1800	5.90	9.35	12.80	6.95	10.90	14.80
2000	5.80	9.15	12.55	6.80	10.65	14.50
2400	5.55	8.85	12.15	6.50	10.25	14.00
2800	5.40	8.60	11.85	6.25	9.90	13.60
3200	5.30	8.45	11.60	6.05	9.70	13.30
3600	5.15	8.30	11.40	5.90	9.45	13.05
4000	5.10	8.15	11.20	5.75	9.30	12.85
5000	4.90	7.90	10.90	5.50	8.95	12.45
7500	3.75	6.30	8.80	3.90	7.00	10.10
10000	4.45	7.25	10.05	4.85	8.15	11.45

Modification Codes:

1	Earth Floor	-1.50
2	No Lighting	-0.60
3	Wood Floor	-1.00
4	Heating	0.60
5	Single Pitch Roof	-0.30
6	Insulation, First Floor	1.65
7	Insulation, Second Floor	0.55
8	Insulation, Third Floor	0.55

Specifications:

L GRADE

Foundation:	Masonry walls and footing.
Exterior Walls:	Concrete block; or low grade dimensioned sheathing, roll composition or metal on wood or light steel frame. Minimal windows.
Interior:	Unfinished.
Ground Floor:	Concrete.
Upper Floor:	Wood on wood joist or wood on steel frame.
Roof:	Double pitch, metal or asphalt shingles. Roofing on wood sheathing with wood or steel frame.
Other Features:	Minimal electrical and water service; roof ventilators.

A GRADE

Foundation:	Masonry walls and footing.
Exterior Walls:	Concrete block; or wood or metal siding on wood or light steel framing. Adequate number of wood or steel sash windows.
Interior:	Unfinished.
Ground Floor:	Concrete.
Upper Floor:	Wood on wood joists or wood on steel frame.
Roof:	Double pitch; metal or asphalt shingles. Roofing on wood sheathing with wood or steel frame.
Other Features:	Adequate electrical and water service; roof ventilators.

G GRADE

Foundation:	Masonry walls and footing.
Exterior Walls:	Concrete block or good quality wood or metal siding on good grade dimensioned wood or light steel frame. Numerous good quality wood or steel sash windows.
Interior:	Interior sheathing on walls with plywood ceilings; may be painted.
Ground Floor:	Concrete with drains.
Upper Floor:	Wood on wood joists or wood on steel frame.
Roof:	Double pitch; good quality; asphalt or wood shingles, roofing on wood sheathing with wood or light steel frame.
Other Features:	Good electrical and water service; roof ventilators.

E GRADE

Foundation:	Masonry walls and footings.
Exterior Walls:	Brick or block; Brick veneer or stucco on high grade dimensioned wood frame; Steel panels or best steel framing. Numerous excellent quality wood or steel sash windows.
Interior:	Finished and painted interior walls and ceiling.
Ground Floor:	Concrete with drains.
Upper Floor:	Wood on wood joists or wood on steel frame.
Roof:	Double pitch; best quality asphalt or wood shingle. Roofing on wood sheathing with wood or steel frame.
Other Features:	Wiring in conduit with numerous electrical fixtures and outlets; good water service; roof ventilators.

PART 4: REPLACEMENT COST

44.4.12. PRE-FABRICATED STEEL BUILDINGS

AREA	AX1 VERTICAL WALLS 10' WALL HEIGHT	AX2 SLANT WALLS 10' WALL HEIGHT
1000	7.80	7.01
1200	7.24	6.50
1400	6.82	6.13
1600	6.45	5.80
1800	6.17	5.57
2000	5.94	5.34
2200	5.76	5.20
2400	5.57	5.01
2600	5.43	4.87
2800	5.29	4.78
3000	5.15	4.64
3200	5.06	4.55
3400	4.97	4.46
3600	4.87	4.36
3800	4.78	4.32
4000	4.69	4.22
4500	4.55	4.09
5000	4.41	3.95
5500	4.27	3.85
6000	4.18	3.76
6500	4.09	3.67
7000	3.99	3.57
7500	3.90	3.53
8000	3.85	3.44
9000	3.71	3.34
10000	3.62	3.25

Specifications:

L GRADE

Frame: Light steel frame and rafters.
 Exterior Walls: Sheet metal.
 Interior: Unfinished.
 Floor: Concrete on grade or asphalt.
 Other Features: Minimal electrical service.

A GRADE

Frame: Steel frame and rafters.
 Exterior Walls: Steel siding.
 Interior: Unfinished.
 Floor: Concrete on grade or asphalt.
 Other Features: Adequate lighting and outlets, equipment, and doors.

G GRADE

Frame: Steel frame and truss.
 Exterior Walls: Surface treated steel or aluminum siding.
 Interior: Unfinished, shop area including tool cabinets.
 Floor: Concrete on grade.
 Other Features: Good lighting and outlets. Adequate equipment and pedestrian doors.

Modification Codes:

1	Earth Floor	-1.50
2	No Lighting	-0.60
3	Insulation	0.30
4	Heating	0.60
5	Grain Package	2.00
6	Enameled Steel/Aluminum	0.35

Special Modification Code:

FX1 Additional Story Height. The average base height for Pre-Fabricated Steel Buildings is 10'. If the structure being coded has a story height greater than 10', enter the number of feet over the base in the Quantity field and enter the area in the Size field.

44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

44.4.13. STEEL GRAIN BINS

DIA	HGT	CU. FT.	AG1 WITHOUT DRYING BIN COST	AG2 WITH DRYING BIN COST	DIA	HGT	CU. FT.	AG1 WITHOUT DRYING BIN COST	AG2 WITH DRYING BIN COST
15	7.3	1295	2,100	2,610	36	58.7	59719	22,930	25,860
15	11.0	1944	2,330	2,840	42	14.7	20324	8,880	12,870
15	14.7	2592	2,560	3,070	42	18.3	25395	10,690	14,680
15	18.3	3239	2,790	3,300	42	22.0	30480	12,500	16,490
18	11.0	2799	2,640	3,370	42	25.7	35564	14,320	18,310
18	14.7	3733	2,970	3,700	42	33.0	45720	17,940	21,930
18	18.3	4664	3,300	4,030	42	40.3	55875	21,560	25,550
18	22.0	5598	3,630	4,370	42	47.7	66044	25,180	29,170
18	25.7	6532	3,970	4,700	42	58.7	81284	30,620	34,610
18	33.0	8397	4,630	5,360	48	14.7	26546	11,100	16,310
18	40.3	10263	5,300	6,030	48	18.3	33169	13,460	18,670
18	47.7	12131	5,960	6,700	48	22.0	39810	15,830	21,040
21	11.0	3810	3,000	3,990	48	25.7	46451	18,200	23,410
21	14.7	5081	3,450	4,450	48	33.0	59715	22,930	28,140
21	18.3	6349	3,900	4,900	48	40.3	72979	27,660	32,870
21	22.0	7620	4,360	5,350	48	47.7	86262	32,390	37,600
21	25.7	8891	4,810	5,810	48	58.7	106167	39,490	44,700
21	33.0	11430	5,710	6,710	60	18.3	51827	20,120	28,250
21	40.3	13969	6,620	7,620	60	25.7	72580	27,510	35,650
21	47.7	16511	7,520	8,520	60	40.3	114030	42,290	50,430
24	11.0	4976	3,410	4,710	60	47.7	134784	49,690	57,830
24	14.7	6637	4,000	5,310					
24	18.3	8292	4,590	5,900					
24	22.0	9953	5,190	6,490					
24	25.7	11613	5,780	7,080					
24	33.0	14929	6,960	8,260					
24	40.3	18245	8,140	9,450					
24	47.7	21565	9,330	10,630					
27	11.0	6298	3,880	5,530					
27	14.7	8399	4,630	6,280					
27	18.3	10495	5,380	7,030					
27	22.0	12596	6,130	7,780					
27	25.7	14697	6,880	8,530					
27	33.0	18894	8,370	10,020					
27	40.3	23091	9,870	11,520					
27	47.7	27294	11,370	13,020					
30	14.7	10370	5,340	7,370					
30	18.3	12957	6,260	8,290					
30	22.0	15551	7,180	9,220					
30	25.7	18145	8,110	10,140					
30	33.0	23326	9,950	11,990					
30	40.3	28508	11,800	13,840					
30	47.7	33696	13,650	15,690					
36	14.7	14932	6,960	9,890					
36	18.3	18658	8,290	11,220					
36	22.0	22393	9,620	12,550					
36	25.7	26129	10,950	13,880					
36	33.0	33590	13,610	16,540					
36	40.3	41051	16,270	19,200					
36	47.7	48522	18,940	21,870					

44.4.14. STEEL HOPPER BINS

DIA	HGT	CU. FT.	AG3 COST
6	10.0	283	550
6	16.0	452	660
6	21.0	594	750
6	25.0	707	820
6	28.0	792	880
9	14.0	891	1,030
9	17.0	1081	1,150
9	20.0	1272	1,270
9	25.0	1590	1,470
9	28.0	1781	1,600
9	31.0	1972	1,720
12	20.0	2262	2,030
12	25.0	2827	2,390
12	31.0	3506	2,820
12	36.0	4072	3,180
12	42.0	4750	3,610
15	36.0	6362	4,800
15	42.0	7422	5,470
18	36.0	9161	6,780

PART 4: REPLACEMENT COST

44.4.15. POTATO STORAGE BUILDINGS

AREA	A01 POTATO STORAGE UNDERGROUND	A02 POTATO STORAGE ABOVE GROUND
1000	5.00	15.85
2000	4.75	12.75
3000	4.60	11.40
4000	4.55	10.60
6000	4.50	9.65
8000	4.45	9.05
10000	4.40	8.65
15000	4.35	8.05

Modification Codes:

1	Concrete Floor	+1.50
2	No Lighting	-0.60
3	Pole Frame	-2.30

44.4.17. FEED / FENCE BUNKS

BASE PRICES - PER LINEAL FOOT

	FEED BUNK AF1	AF2	FENCE BUNK AF3	AF4
CONCRETE	32.70	-----	22.90	-----
POST & PLANK	-----	17.10	-----	14.30

Special Modification Codes:

FF1	10' Roof	29.70 LnFt
FF2	Mech. Feeder, Auto	74.30 LnFt
FF3	Mech. Feeder, Manual	58.80 LnFt
FF4	Concrete Apron	10.70 LnFt
FF5	Cattle Waterer	340.00 Each
FF6	Cattle/Hog Waterer	420.00 Each

44.4.16. SLURRY SYSTEMS

OIA	HGT	GALLONS	AY1 CIRCULAR COST
25.0	13.0	853	11,010
25.0	18.0	1,181	14,230
32.0	10.0	1,075	13,190
42.0	9.0	1,667	19,000
42.0	13.5	2,501	27,170
42.0	18.0	3,334	35,350
48.0	10.0	2,419	26,380
61.5	9.0	3,574	37,710

WID	LNG	GALLONS	AY2 RECTANGULAR* COST
20	20	535	6,710
20	40	1,070	11,090
20	60	1,604	15,480
20	80	2,139	19,860
20	100	2,674	24,250

* Based on 10' height.

44.4.18. SCALES

CAPACITY (POUNDS)	CA1 PLATFORM SCALE COST	CA2 TRUCK SCALE COST	CA3 CATTLE SCALE COST
10,000	9,000	12,000	7,500
20,000	15,500	14,000	10,000
40,000	28,500	18,000	15,000
60,000	-----	22,000	-----
80,000	-----	26,000	-----

44. RESIDENTIAL AND AGRICULTURAL OUTBUILDINGS

GRAIN BINS



FEED BUNKS



POTATO STORAGE BUILDINGS



SLURRY SYSTEMS



45. COMMERCIAL BUILDINGS

TABLE OF CONTENTS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE
45.1.	COMMERCIAL / INDUSTRIAL VALUATION OVERVIEW	1	45.5.3.	COMMERCIAL INTERIOR FINISH PRICING TABLE	46
45.1.1.	COST VALUATION	1	45.5.4.	COMMERCIAL HEATING, AIR CONDITIONING, AND PLUMBING PRICING TABLE	47
45.1.1.1.	SELECTING THE PROPER QUALITY GRADE	1	45.5.5.	COMMERCIAL BUILDING OTHER FEATURES PRICING TABLE	48
45.1.1.2.	QUALITY GRADES AND FACTORS	2	45.5.6.	COMMERCIAL OTHER BUILDING AND YARD IMPROVEMENTS PRICING TABLE	49
45.1.2.	INCOME VALUATION	2	45.5.7.	COMMERCIAL ELEVATOR PRICING TABLES	50
45.2.	COMMERCIAL / INDUSTRIAL COST SCHEDULES	3	45.5.8.	GRAIN ELEVATORS & ANNEXES	51
45.3.	MAJOR STRUCTURAL TYPES AND GRADES	3	45.5.9.	FLAT STORAGE	51
45.4.	MANUAL PRICING INSTRUCTIONS	42	45.5.10.	TANKS	51
45.5.	COMMERCIAL / INDUSTRIAL CONSTRUCTION PRICING TABLES	44	45.5.11.	BOLTED INDUSTRIAL BINS	51
45.5.1.	COMMERCIAL STRUCTURE PRICING TABLE	44			
45.5.2.	COMMERCIAL EXTERIOR WALL PRICING TABLE	45			

45.1. COMMERCIAL / INDUSTRIAL VALUATION OVERVIEW

The Commercial/Industrial system provides for both the cost and income approaches to value. The cost approach is a model approach with adjustments to the component level. The income approach utilizes income models which do not require income and expense data on each individual property, but which permit income adjustment or override parameters on the exceptional properties. Limited applications of the market approach are available for multifamily type properties.

45.1.1. COST VALUATION

Pricing schedules and related cost tables are included in this section to assist the appraiser in arriving at accurate estimates of Replacement Cost New. They have been developed by applying segregated cost to all components. The application of the schedules involves the computer pricing of all components from the data collection form.

Costs have been developed for all basic structure types, interior and mechanical costs, and exterior wall costs; and are computed to develop an overall Replacement Cost New.

Since various construction types are necessary for different uses, several costs were developed for basic structures. High rise office buildings require different cost ranges than properties such as one-story warehouses, commercial buildings, and service stations. Interior finish, heating, plumbing, air conditioning and lighting requirements are varied for different uses, requiring cost ranges. Certain use types, such as Fast or Franchised Food Restaurants and Service Stations, begin with a specified cost, then are modified by grade. Building Other Features, attached improvements, and Other Building and Yard Improvements are set up on a more simplified cost system requiring in most cases only minor modifications.

45.1.1.1. Selecting the Proper Quality Grade

The quality grade of materials and workmanship is one of the most significant adjustments to be made in the cost approach. Many buildings with similar square feet areas and uses can vary significantly in cost. This is due to quality of materials and workmanship. A better quality building is expected to have a longer economic life and requires less maintenance. The appraiser must

PART 4: REPLACEMENT COST

analyze these characteristics in order to arrive at an estimate of quality grade.

Most properties will be computer priced at an average or typical building grade and will require no quality grade percent modification. The generated value for replacement less normal condition/utility factor will be accurate. It becomes the appraiser's responsibility to analyze the generated values.

45.1.1.2. Quality Grades and Factors

The commercial system uses an alphabetic grading scale with "A" as average quality of construction, with a range of grades from a low of "L" (low cost) to a high of "E" (excellent construction). A plus (+) and minus (-) adjustment is allowed within each category. The relative value ranges are indicated by the following table.

<u>Grade</u>	<u>Value Range</u>
	- .40
L - Low Cost	.50
	+ .60
	- .70
F - Fair	.78
	+ .85
	- .92
A - Average	1.00
	+ 1.08
	- 1.17
G - Good	1.26
	+ 1.35
	- 1.45
V - Very Good	1.55
	+ 1.67
	- 1.85
E - Excellent	2.10
	+ 2.50

45.1.2. INCOME VALUATION

The income model approach differs from traditional computer-assisted income valuation techniques in that it does not require income data on each property. Income models may be developed through manual analysis of income and expense data or by utilizing computerized modeling software, such as the MRA module in MAS, to analyze the data. Models are developed on the basic physical characteristics collected on the standard data collection form. Valuation results may be adjusted for exceptional properties by inputting income quality rating, expense adjustment factor, occupancy override, and capitalization rate overrides. Provisions are included for excess acreage valuation.

45.2. COMMERCIAL / INDUSTRIAL COST SCHEDULES

The Commercial/Industrial Costs were derived in the following manner.

Numerous **Structure Type Codes** were created and combined into ten **Basic Structure Types**, which include the following:

FRAMING COST - The Frame Cost Rate (dollars per square foot of floor area excluding basement area) as a function of Construction Class and Basic Structure Type.

ROOFING COSTS - The cost rates for the roof framing and roofing materials (dollars per square foot of floor area covered) as a function of basic structure type. Insulation costs have been included in the roofing materials.

FLOOR STRUCTURE COST - The Structural Floor Cost (dollars per square foot of the floor area) as a function of the basic structure type.

EXTERIOR WALL MATERIAL COST - The Exterior Wall Material Cost (dollars per square foot of wall area) as a function of material type code and the basic structure type. All wall material costs include insulation, normal openings, and appropriate back-up materials when required.

CEILING AND FLOOR FINISH COST - The Ceiling and Floor Finish Cost (dollars per square foot of floor area) as a function of the Basic Structure Type or multi-use use type code.

BASEMENT COST - The Basement Wall Cost Rate (dollars per square foot of wall area) as a function of the Construction Class and Basic Structure Type. The cost of waterproofing has been added.

Use Type Codes were developed which equate to the type of interior utilization of the structure being described. Costs were developed for the specific use types, which include the following:

INTERIOR PARTITION COST - The Interior Partition Cost (dollars per square foot of floor area) as a function of use type code and quality or extent of occurrence code.

HEATING COST - The Heating Cost (dollars per square foot of floor area) as a function of the heating system type and the use type code.

AIR CONDITIONING COST - The Air Conditioning Cost (dollars per square foot of floor area) as a function of the air conditioning system type and the use type code.

PLUMBING COST - The Plumbing cost (dollars per square foot of floor area) as a function of use type code and quality or extent of occurrence code.

LIGHTING COST - The Lighting cost (dollars per square foot of floor area) as a function of use type code. Lighting costs are assumed to be 100% in all use type codes.

45.3. MAJOR STRUCTURAL TYPES AND GRADES

The following pages contain representative photos of major commercial building construction classes and grades.

PART 4: REPLACEMENT COST

Structure Type:
Garden Apartment

Structure Type Code: 211

Grade: A+

Use Type:
Apartment

Use Type Code: 011

Construction Class: 1



Structure Type:
Garden Apartment

Structure Type Code: 211

Grade: A

Use Type:
Apartment

Use Type Code: 011

Construction Class: 1

Structure Type:
Garden Apartment

Structure Type Code: 211

Grade: A

Use Type:
Apartment

Use Type Code: 011

Construction Class: 1



Structure Type:
Garden Apartment

Structure Type Code: 211

Grade: A-

Use Type:
Apartment

Use Type Code: 011

Construction Class: 1



Structure Type:
Garden Apartment

Structure Type Code: 211

Grade: F+

Use Type:
Apartment

Use Type Code: 011

Construction Class: 1

Structure Type:
High Rise Apartment

Structure Type Code: 212

Grade: G

Use Type:
Apartment

Use Type Code: 011

Construction Class: 2



PART 4: REPLACEMENT COST

Structure Type:
Hotel/Motel, High Rise

Structure Type Code: 314

Grade: G

Use Type:
Hotel

Use Type Code: 012

Construction Class: 2



Structure Type:
Hotel/Motel, High Rise

Structure Type Code: 314

Grade: G-

Use Type:
Hotel

Use Type Code: 012

Construction Class: 2

Structure Type:
Hotel/Motel, High Rise

Structure Type Code: 314

Grade: A

Use Type:
Hotel

Use Type Code: 012

Construction Class: 1



Structure Type:
Hotel/Motel, Low Rise

Structure Type Code: 315

Grade: A

Use Type:
Motel

Use Type Code: 013

Construction Class: 1



Structure Type:
Hotel/Motel, Low Rise

Structure Type Code: 315

Grade: A

Use Type:
Motel

Use Type Code: 013

Construction Class: 1



Structure Type:
Hotel/Motel, Low Rise

Structure Type Code: 315

Grade: A

Use Type:
Motel

Use Type Code: 013

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Restaurant

Structure Type Code: 321

Grade: V

Use Type:
Restaurant

Use Type Code: 031

Construction Class: 1



Structure Type:
Restaurant

Structure Type Code: 321

Grade: G+

Use Type:
Restaurant

Use Type Code: 031

Construction Class: 1

Structure Type:
Restaurant

Structure Type Code: 321

Grade: A

Use Type:
Restaurant

Use Type Code: 031

Construction Class: 1



Structure Type:
Fast Food

Structure Type Code: 325

Grade: A

Use Type:
Franchise Restaurant
Bonanza Family Restaurant

Use Type Code: 110

Construction Class: 1



Structure Type:
Fast Food

Structure Type Code: 325

Grade: G+

Use Type:
Franchise Restaurant
Burger King

Use Type Code: 112

Construction Class: 1

Structure Type:
Fast Food

Structure Type Code: 325

Grade: A

Use Type:
Franchise Restaurant
Dairy Queen

Use Type Code: 121

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Fast Food

Structure Type Code: 325

Grade: A+

Use Type:
Franchise Restaurant
Godfather's Pizza

Use Type Code: 132

Construction Class: 1



Structure Type:
Fast Food

Structure Type Code: 325

Grade: A

Use Type:
Franchise Restaurant
Kentucky Fried Chicken

Use Type Code: 140

Construction Class: 1

Structure Type:
Fast Food

Structure Type Code: 325

Grade: A

Use Type:
Franchise Restaurant
Long John Silver's Seafood
Restaurant

Use Type Code: 150

Construction Class: 1



Structure Type:
Fast Food

Structure Type Code: 325

Grade: G+

Use Type:
Franchise Restaurant
McDonald's

Use Type Code: 153

Construction Class: 1



Structure Type:
Fast Food

Structure Type Code: 325

Grade: A+

Use Type:
Franchise Restaurant
Pizza Hut

Use Type Code: 162

Construction Class: 1

Structure Type:
Fast Food

Structure Type Code: 325

Grade: A+

Use Type:
Franchise Restaurant
J-B Big Boy

Use Type Code: 136

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Fast Food

Structure Type Code: 325

Grade: A

Use Type:
Franchise Restaurant
Mr. Steak

Use Type Code: 156

Construction Class: 1



Structure Type:
Fast Food

Structure Type Code: 325

Grade: A

Use Type:
Franchise Restaurant
Taco Bell

Use Type Code: 180

Construction Class: 1

Structure Type:
Fast Food

Structure Type Code: 325

Grade: G

Use Type:
Franchise Restaurant
Village Inn Pancake House

Use Type Code: 190

Construction Class: 1



Structure Type:
Fast Food

Structure Type Code: 325

Grade: G-

Use Type:
Franchise Restaurant
Wendy's Old Fashioned
Hamburgers

Use Type Code: 194

Construction Class: 1



Structure Type:
Fast Food

Structure Type Code: 325

Grade: A

Use Type:
Franchise Restaurant
Arby's Roast Beef

Use Type Code: 104

Construction Class: 1



Structure Type:
Bar/Lounge

Structure Type Code: 327

Grade: A-

Use Type:
Tavern or Bar

Use Type Code: 035

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Bar/Lounge

Structure Type Code: 327

Grade: A-

Use Type/(Use Type Code)
Tavern or Bar (035)
Multi-Use Apartment (081)

Construction Class: 1



Structure Type:
Bar/Lounge

Structure Type Code: 327

Grade: A-

Use Type/(Use Type Code)
Tavern or Bar (035)
Multi-Use Apartment (081)

Construction Class: 1

Structure Type:
Auto Dealer, Full Service

Structure Type Code: 331

Grade: G

Use Type/(Use Type Code)
Auto Showroom (046)
Auto Parts & Service (047)

Construction Class: 2



Structure Type:
Auto Dealer, Full Service

Structure Type Code: 331

Grade: A

Use Type/(Use Type Code)
Auto Showroom (046)
Auto Parts & Service (047)

Construction Class: 1



Structure Type:
Auto Dealer, Full Service

Structure Type Code: 331

Grade: A

Use Type/(Use Type Code)
Auto Showroom (046)
Auto Parts & Service (047)

Construction Class: 1

Structure Type:
Auto/Equipment Service
Garage

Structure Type Code: 332

Grade: A

Use Type/(Use Type Code)
Auto Parts & Service (047)

Construction Class: 4

Use Type/(Use Type Code)
Multi-Use Sales (083)

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Auto/Equipment Service Garage

Structure Type Code: 332

Grade: A

Use Type/(Use Type Code)
Auto Parts & Service (047)
Multi-Use Sales (083)

Construction Class: 1



Structure Type:
Auto/Equipment Service Garage

Structure Type Code: 332

Grade: A

Use Type/(Use Type Code)
Auto Parts & Service (047)
Multi-Use Sales (083)

Construction Class: 1

Structure Type:
Service Station (full service)

Structure Type Code: 333

Grade: G

Use Type:
Service Station with Bays

Use Type Code: 070

Construction Class: 1

OBV Type: Canopy (good)
OBV Code: CP7



Structure Type:
Service Station (full service)

Structure Type Code: 333

Grade: G

Use Type:
Service Station Conversion Retail

Use Type Code: 071

Construction Class: 1

OBY Type: Canopy (average)
OBY Code: CP6



Structure Type:
Service Station (full service)

Structure Type Code: 333

Grade: G

Use Type:
Service Station with Bays

Use Type Code: 070

Construction Class: 1

OBY Type: Canopy (average)
OBY Code: CP8

OBY Type:
Service Station Attendant's Booth

OBY Code: GS2

OBY Type: Canopy (good)

OBY Code: CP7



PART 4: REPLACEMENT COST

OBY Type:
Service Station Attendant's Booth

OBY Code: GS2

OBY Use Type: Canopy (good)

OBY Code: CP7



OBY Type:
Service Station Attendant's Booth

OBY Code: GS2

OBY Type: Canopy (good)

OBY Code: CP7

Structure Type:
Car Wash (Manual)

Structure Type Code: 336

Grade: A

Use Type:
Car Wash (Manual)

Use Type Code: 074

Construction Class: 1



Structure Type:
Car Wash (automatic)

Structure Type Code: 337

Grade: G

Use Type:
Car Wash (automatic)

Use Type Code: 075

Construction Class: 1



Structure Type:
Car Wash (automatic)

Structure Type Code: 337

Grade: A

Use Type:
Car Wash (automatic)

Use Type Code: 075

Construction Class: 1

Structure Type:
Parking Deck

Structure Type Code: 338

Grade: A

Use Type/(Use Type Code)
Multi-Use Sales (083)
Parking Garage (090)
Parking Upper Deck (990)

Construction Class: 2



PART 4: REPLACEMENT COST

Structure Type:
Parking Garage/Deck

Structure Type Code: 338

Grade: A

Use Type/(Use Type Code)
Multi-Use Sales (083)
Parking Garage (090)
Parking Upper Deck (990)

Construction Class: 2



Structure Type:
Parking Garage/Deck

Structure Type Code: 338

Grade: A

Use Type/(Use Type Code)
Parking Garage (090)
Parking Upper Deck (990)

Construction Class: 2

Structure Type:
Regional Shopping Mall

Structure Type Code: 341

Grade: G+ sectionalized as to use

Use Type/(Use Type Code)
Department Store (032)
Discount Store/Market (033)
Retail Store (034)
Covered Mall (095)

Construction Class: 2



Structure Type:
Community Shopping Center

Structure Type Code: 342

Grade: G-

Use Type:
Retail Store

Use Type Code: 034

Construction Class: 2



Structure Type:
Neighborhood Shopping Center

Structure Type Code: 343

Grade: G-

Use Type:
Retail Store

Use Type Code: 034

Construction Class: 2

Structure Type:
Strip Shopping Center

Structure Type Code: 344

Grade: A

Use Type:
Retail Store
(above normal partitions)

Use Type Code: 034

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Strip Shopping Center

Structure Type Code: 344

Grade: A+ sectionalized as to use

Use Type:
Retail Store
(above normal partitions)

Use Type Code: 034

Construction Class: 2



Structure Type:
Strip Shopping Center

Structure Type Code: 344

Grade: A

Use Type:
Retail Store
(above normal partitions)

Use Type Code: 034

Construction Class: 1

Structure Type:
Strip Shopping Center

Structure Type Code: 344

Grade: A+

Use Type:
Retail Store

Use Type Code: 034

Construction Class: 1



Structure Type:
Discount Department Store

Structure Type Code: 345

Grade: A

Use Type:
Discount Store/Market

Use Type Code: 033

Construction Class: 2



Structure Type:
Discount Department Store

Structure Type Code: 345

Grade: A

Use Type:
Discount Store/Market

Use Type Code: 033

Construction Class: 2

Structure Type:
Department Store

Structure Type Code: 346

Grade: G

Use Type:
Department Store

Use Type Code: 032

Construction Class: 2



PART 4: REPLACEMENT COST

Structure Type:
Supermarket

Structure Type Code: 347

Grade: A+

Use Type:
Discount Store/Market

Use Type Code: 033

Construction Class: 2



Structure Type:
Supermarket

Structure Type Code: 347

Grade: F

Use Type:
Discount Store/Market

Use Type Code: 033

Construction Class: 1

Use Type:
Multi-Use Storage

Use Type Code: 084

Construction Class: 4

Structure Type:
Convenience Food Market

Structure Type Code: 348

Grade: A+

Use Type:
Convenience Store

Use Type Code: 038

Construction Class: 1



Structure Type:
Convenience Food Market

Structure Type Code: 348

Grade: A+

Use Type:
Convenience Store

Use Type Code: 038

Construction Class: 1



Structure Type:
Convenience Food Market

Structure Type Code: 348

Grade: A

Use Type:
Convenience Store

Use Type Code: 038

Construction Class: 1

Structure Type:
Medical Office Building

Structure Type Code: 349

Grade: G

Use Type:
Medical Center

Use Type Code: 052

Construction Class: 2



PART 4: REPLACEMENT COST

Structure Type:
Bank

Structure Type Code: 351

Grade: A+

Use Type:
Bank & Savings Institution

Use Type Code: 051

Construction Class: 2



Structure Type:
Bank

Structure Type Code: 351

Grade: A

Use Type:
Bank & Savings Institution

Use Type Code: 051

Construction Class: 1

Structure Type:
Savings Institution

Structure Type Code: 352

Grade: A-

Use Type:
Bank & Savings Institution

Use Type Code: 051

Construction Class: 2



Structure Type:
Savings Institution

Structure Type Code: 352

Grade: G

Use Type:
Bank & Savings Institution

Use Type Code: 051

Construction Class: 2



Structure Type:
Savings Institution

Structure Type Code: 352

Grade: G

Use Type:
Bank & Savings Institution

Use Type Code: 051

Construction Class: 2

Structure Type:
Office Building, Low Rise

Structure Type Code: 353

Grade: G-

Use Type:
Office Building

Use Type Code: 053

Construction Class: 2



PART 4: REPLACEMENT COST

Structure Type:
Office Building, Low Rise

Structure Type Code: 353

Grade: G

Use Type:
Office Building

Use Type Code: 053

Construction Class: 2



Structure Type:
Office Building, Low Rise

Structure Type Code: 353

Grade: A

Use Type:
Office Building

Use Type Code: 053

Construction Class: 2

Structure Type:
Office Building, High Rise

Structure Type Code: 354

Grade: G

Use Type/(Use Type Code)
Office Building (053)
Parking Garage (090)

Construction Class: 2



Structure Type:
Office Building, High Rise

Structure Type Code: 354

Grade: G

Use Type:
Office Building

Use Type Code: 053

Construction Class: 2



Structure Type:
Office Building, High Rise

Structure Type Code: 354

Grade: G

Use Type/(Use Type Code)
Retail Store (034)
Office Building (053)

Construction Class: 2

Structure Type:
Motion Picture Theater

Structure Type Code: 364

Grade: G-

Use Type:
Auditorium or Theater

Use Type Code: 061

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Cinema/Theater

Structure Type Code: 365

Grade: A

Use Type:
Cinema

Use Type Code: 062

Construction Class: 2



Structure Type:
Hangar

Structure Type Code: 368

Grade: G

Use Type:
Hangar

Use Type Code: 042

Construction Class: 2

Structure Type:
Downtown Row Type

Structure Type Code: 371

Grade: A

Use Type/(Use Type Code)
Multi-Use Apartment (081)
Multi-Use Office (082)

Construction Class: 1



Structure Type:
Downtown Row Type

Structure Type Code: 371

Grade: A

Use Type/(Use Type Code)
Retail Store (034)
Multi-Use Office (082)

Construction Class: 1



Structure Type:
Downtown Row Type

Structure Type Code: 371

Grade: A

Use Type/(Use Type Code)
Retail Store (034)
Multi-Use Office (082)

Construction Class: 1

Structure Type:
Retail - Single Occupancy

Structure Type Code: 373

Grade: A

Use Type:
Retail Store

Use Type Code: 034

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Retail - Single Occupancy

Structure Type Code: 373

Grade: A

Use Type:
Retail Store

Use Type Code: 034

Construction Class: 4



Structure Type:
Retail - Single Occupancy

Structure Type Code: 373

Grade: A

Use Type:
Retail Store

Use Type Code: 034

Construction Class: 1

Structure Type:
Retail - Single Occupancy

Structure Type Code: 373

Grade: A

Use Type:
Retail Store

Use Type Code: 034

Construction Class: 1



Structure Type:
Retail - Single Occupancy

Structure Type Code: 373

Grade: A

Use Type:
Multi-Use Office

Use Type Code: 082

Construction Class: 1



Structure Type:
Retail - Single Occupancy

Structure Type Code: 373

Grade: A

Use Type:
Multi-Use Sales

Use Type Code: 083

Construction Class: 1

Structure Type:
Retail - Single Occupancy

Structure Type Code: 373

Grade: F

Use Type:
Multi-Use Storage

Use Type Code: 084

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Retail - Single Occupancy

Structure Type Code: 373

Grade: L+

Use Type:
Multi-Use Sales

Use Type Code: 083

Construction Class: 1



Structure Type:
Retail - Single Occupancy

Structure Type Code: 373

Grade: L+

Use Type:
Multi-Use Sales

Use Type Code: 083

Construction Class: 1

Structure Type:
Retail - Multi Occupancy

Structure Type Code: 374

Grade: A

Use Type/(Use Type Code)
Multi-Use Office (082)
Multi-Use Sales (083)
Multi-Use Storage (084)

Construction Class: 1



Structure Type:
Retail - Multi Occupancy

Structure Type Code: 374

Grade: A

Use Type:
Retail Store

Use Type Code: 034

Construction Class: 1



Structure Type:
Retail - Multi Occupancy

Structure Type Code: 374

Grade: A

Use Type/(Use Type Code)
Multi-Use Apartment (081)
Multi-Use Office (082)
Multi-Use Sales (083)

Construction Class: 1

Structure Type:
Bowling Alley

Structure Type Code: 381

Grade: A-

Use Type:
Multi-Use Sales

Use Type Code: 083

Construction Class: 1



Structure Type:
Tennis Club - Indoor

Structure Type Code: 385

Grade: A-

Use Type:
Tennis Club

Use Type Code: 048

Construction Class: 4



Structure Type:
Racquet Club - Indoor

Structure Type Code: 386

Grade: A+

Use Type:
Racquet Ball Court

Use Type Code: 049

Construction Class: 2

Structure Type:
Cold Storage Facility

Structure Type Code: 391

Grade: A

Use Type:
Cold Storage

Use Type Code: 060

Construction Class: 1



Structure Type:
Truck Terminal

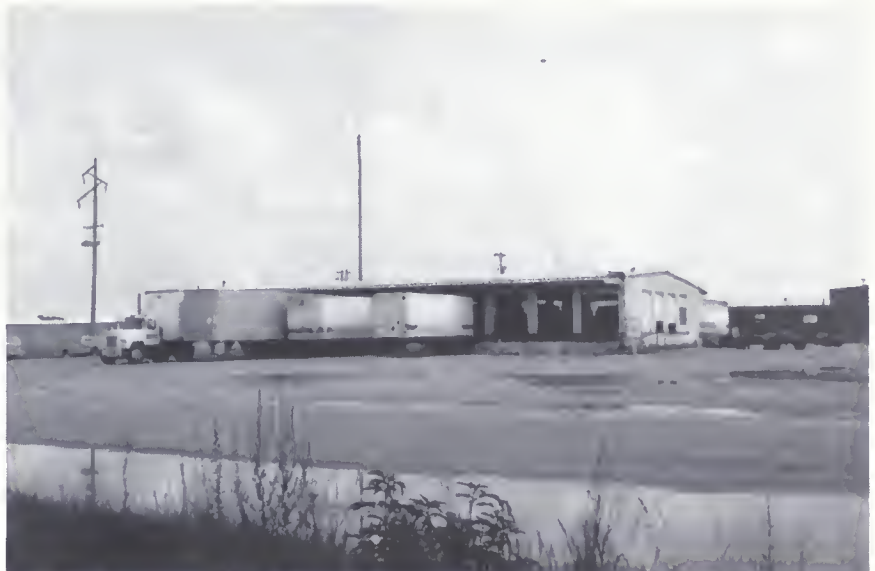
Structure Type Code: 395

Grade: A

Use Type:
Warehouse
(above normal partitions)

Use Type Code: 045

Construction Class: 4



Structure Type:
Mini Warehouse

Structure Type Code: 396

Grade: A

Use Type:
Mini Warehouse
(above normal partitions)

Use Type Code: 041

Construction Class: 1

Structure Type:
Warehouse

Structure Type Code: 398

Grade: A

Use Type/(Use Type Code)
Warehouse (045)
Multi-Use Office (082)

Construction Class: 1



PART 4: REPLACEMENT COST

Structure Type:
Warehouse

Structure Type Code: 398

Grade: A

Use Type:
Warehouse

Use Type Code 045:

Construction Class: 1



Structure Type:
Warehouse

Structure Type Code: 398

Grade: A

Use Type:
Warehouse

Use Type Code: 045

Construction Class: 1

Structure Type:
Prefab Warehouse

Structure Type Code: 399

Grade: A

Use Type:
Multi-Use Sales

Use Type Code: 083

Construction Class: 4



Structure Type:
Prefab Warehouse

Structure Type Code: 399

Grade: A

Use Type/(Use Type Code)
Warehouse (045)
Multi-Use Office ((082)

Construction Class: 4



Structure Type:
Prefab Warehouse

Structure Type Code: 399

Grade: A

Use Type:
Warehouse

Use Type Code: 045

Construction Class: 4

Structure Type:
Manufacturing / Processing

Structure Type Code: 401

Grade: G-

Use Type/(Use Type Code)
Manufacturing (043)
Multi-Use Office (082)

Construction Class: 2



PART 4: REPLACEMENT COST

Structure Type:
Manufacturing / Processing

Structure Type Code: 401

Grade: A

Use Type/(Use Type Code)
Light Manufacturing (044)
Multi-Use Office (082)

Construction Class: 1



Structure Type:
Manufacturing / Processing

Structure Type Code: 401

Grade: A

Use Type:
Light Manufacturing

Use Type Code: 044

Construction Class: 2

Structure Type:
Manufacturing / Processing

Structure Type Code: 401

Grade: A

Use Type:
Warehouse

Use Type Code: 045

Construction Class: 1



Structure Type:
Manufacturing / Processing

Structure Type Code: 401

Grade: F

Use Type:
Light Manufacturing

Use Type Code: 044

Construction Class: 4



Structure Type:
Manufacturing / Processing

Structure Type Code: 401

Grade: F

Use Type:
Light Manufacturing

Use Type Code: 044

Construction Class: 4

45.4. MANUAL PRICING INSTRUCTIONS

Although the Commercial/Industrial CAMA System has computer pricing capability, it is sometimes desirable to manually price improvements. The following is the correct procedure for manually pricing commercial/industrial improvements utilizing the computer-generated cost tables.

As an aid to manually pricing C/I improvements, a manual pricing work sheet has been provided. An example copy is shown at the end of this section.

Each exterior/interior line is individually priced according to the following procedure.

1. Determine the Basic Structure Code by utilizing the Building Construction Type Cost Schedule and the Structure Type Code located in the General Building Data section of either the data collection form or the computer screen COM-S5.

Example:

Structure Type 321 (Restaurant) has a Basic Structure Code of 03.

2. Determine the Construction Class (Framing) and Floor Level of the Exterior/Interior Line.
3. Determine the Building Base Rate by using the Building Construction Type Cost Schedule - based on the Basic Structure Code, Construction Type, and Floor Level.
4. Determine the Exterior Wall Rate by utilizing the Exterior Wall Material Cost Schedule - based on the Exterior Wall Type Code and the Basic Structure Code.
5. Determine the Perimeter Area Ratio, PAR, (expressed to the nearest thousandth) by dividing the perimeter of the building by the area.
6. Multiply the Exterior Wall Rate times the PAR times the Wall Height to determine the Adjusted Wall Rate. This rate will be used to adjust the Building Base Rate for the cost of the exterior walls.

7. Add the Building Base Rate (Step 3) and the Adjusted Wall Rate (Step 6).
8. Determine the Interior Base Rate by utilizing the Interior Cost Schedule - based on the Use Code.
9. The Interior Base Rate must be adjusted because of any difference from the cost of interior finish as included in the rate for the Use Type in the Interior Cost Schedule. Calculate the percent of unfinished area and the Adjusted Finish Rate (equal to the product of the unfinished percentage and the finish rate).

Example:

Use Code 034 (Retail Store) has an Interior Rate = \$14.25

Interior Finish coded as 80% finished.

$\$14.25 \times 20\% \text{ unfinished} = - \$2.85$

10. Determine any necessary adjustments to the Interior Base Rate because of deviations from normal partitioning. Use the rates in the Interior Costs and Adjustments Schedule appropriate for Use and Portion codes.
 11. Determine any necessary adjustments to the Interior Base Rate for Heating and Air Conditioning. Use the rates in the Interior Costs and Adjustments Schedule appropriate for Use, Heating and Air Conditioning codes.
- NOTE:** Central air conditioning may or may not be included in the base rate based on Use Code.
12. Determine any necessary Adjustments to the Interior Base Rate for deviations from normal Plumbing. Use the adjustment appropriate to the Use and Plumbing codes.
 13. Determine the Total Interior Rate of the building by adding the Interior Base Rate and any adjustments for Interior Finish, Partitions, Heating, Air Conditioning, and Plumbing.

45. COMMERCIAL BUILDINGS

14. Add the Total Exterior Rate (Step 7) and the Total Interior Rate (Step 13) to determine the Total Square Foot Rate.
15. Multiply the Total Square Foot Rate by the area of the Exterior/Interior line to determine the Unadjusted Value of the Exterior/Interior line.
16. Determine the Cost of Building Other Features/Attached Improvements (BOF) by utilizing the Building Other Features/Attached Improvements Cost Schedule - based on the BOF Type Code, unit of measure, and rate per unit. Select the rate per unit based on the BOF code, and multiply the rate times the appropriate measurement to determine the value of the BOF (rounded to the nearest \$10).
17. Add the BOF value(s) from Step 16 which belong with the Exterior/Interior line to the Unadjusted Value of the Exterior/Interior line to determine the Unadjusted Replacement Cost New (RCN) (rounded to the nearest \$10).
18. Calculate a Percent Good for the Exterior/Interior line. Follow the instructions in Section 47 to calculate a Percent Good.
19. Multiply the Unadjusted RCN of the Exterior/Interior line times the Percent Good to determine the Base Replacement Cost New Less Depreciation (RCNLD) (rounded to the nearest \$10).
20. Add all the Base RCNLD Exterior/Interior line values to determine a Sub-total of Base RCNLD.
21. Multiply the Sub-total Base RCNLD times the Percent Complete, Grade Factor, Economic Condition Factor, County Index, and the Percent of Ownership (rounded to the nearest \$10) to determine the Building RCNLD.
22. Calculate any Other Building and Yard Improvements (OBY) RCNLD Value using the Commercial Other Buildings and Yard Improvements Pricing Table (45.5.6).
23. Calculate the Adjusted Total Other Improvement Value by multiplying the Total Improvement Value by the Percent Complete and Percent of Ownership (rounded to the nearest \$10).
24. Add the Building RCNLD, Total OBY Value, and Adjusted Total Other Improvement Value to calculate the TOTAL VALUE of the Commercial record.

PART 4: REPLACEMENT COST

45.5. COMMERCIAL / INDUSTRIAL CONSTRUCTION PRICING TABLES

45.5.1. COMMERCIAL STRUCTURE PRICING TABLE

Code	STRUCTURE TYPE Description	Basic Str. Code	BASEMENT				FIRST FLOOR				UPPER FLOOR			
			Wood Joist	Fire Resist.	Fire Proof	Pre-Fab Steel	Wood Joist	Fire Resist.	Fire Proof	Pre-Fab Steel	Wood Joist	Fire Resist.	Fire Proof	Pre-Fab Steel
101	Residential, One Family	10	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
102	Residential, Two Family	10	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
103	Residential, Three Family	10	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
104	Residential, Four Family	10	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
105	Mixed Res/Com (built as Res)	10	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
106	Condominium (common element)	10	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
107	Condominium (fee simple)	10	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
108	Condominium (time share)	10	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
211	Apartment, Garden (1-3 story)	02	7.15	11.70	11.70	----	8.35	13.20	16.70	----	6.00	6.90	11.20	----
212	Apartment, High Rise	01	12.30	14.20	14.20	----	9.65	14.20	17.85	----	6.65	8.95	12.15	----
213	Townhouse/Rowhouse	10	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
314	Hotel/Motel, High Rise	01	12.30	14.20	14.20	----	9.65	14.20	17.85	----	6.65	8.95	12.15	----
315	Hotel/Motel, Low Rise	02	7.15	11.70	11.70	----	8.35	13.20	16.70	----	6.00	6.90	11.20	----
316	Nursing Home	02	7.15	11.70	11.70	----	8.35	13.20	16.70	----	6.00	6.90	11.20	----
318	Boarding or Rooming House	18	3.75	5.95	----	----	8.35	13.15	----	----	6.00	6.95	----	----
319	Mixed Res/Com (built as Com)	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
321	Restaurant	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
325	Fast Food	09	----	----	----	----	----	----	----	----	----	----	----	----
327	Bar or Lounge	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
328	Night Club/Dinner Theatre	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
331	Auto Dealer, Full Service	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
332	Auto/Equipment Service Garage	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
333	Service Station (full service)	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
334	Service Station (self service)	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
335	Truck Stop	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
336	Car Wash (manual)	07	9.35	11.55	11.55	9.35	8.50	10.75	13.30	8.75	6.15	6.80	8.95	6.20
337	Car Wash (automatic)	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
338	Parking Garage/Deck	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
340	Super Regional Shopping Mall	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.50	7.30
341	Regional Shopping Mall	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.50	7.30
342	Community Shopping Center	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.50	7.30
343	Neighborhood Shopping Center	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.50	7.30
344	Strip Shopping Center	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.50	7.30
345	Discount Department Store	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.50	7.30
346	Department Store	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.50	7.30
347	Supermarket	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.50	7.30
348	Convenience Food Market	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.50	7.30
349	Medical Office Building	08	12.85	15.35	15.35	----	11.80	20.25	24.20	----	8.90	13.15	16.90	----
350	Drive-up Bank	05	9.45	14.90	----	----	20.06	34.86	----	----	13.99	19.65	----	----
351	Bank	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
352	Savings Institution	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
353	Office Build, Low Rise	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
354	Office Build, High Rise	08	12.85	15.35	15.35	----	11.80	20.25	24.20	----	8.90	13.15	16.90	----
355	Office Condominium	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
356	Retail Condominium	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
361	Funeral Home	02	7.15	11.70	11.70	----	8.35	13.20	16.70	----	6.00	6.90	11.20	----
362	Veterinary Clinic	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
363	Legitimate Theatre	06	12.25	15.70	15.70	12.25	12.05	19.80	24.30	12.45	8.25	12.50	16.35	8.15
364	Motion Picture Theatre	06	12.25	15.70	15.70	12.25	12.05	19.80	24.30	12.45	8.25	12.50	16.35	8.15
365	Cinema/Theatre	06	12.25	15.70	15.70	12.25	12.05	19.80	24.30	12.45	8.25	12.50	16.35	8.15
367	Social or Fraternal Hall	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
368	Hangar	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
369	Day Care Center	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
371	Downtown Row Type	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
373	Retail - Single Occupancy	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
374	Retail - Multi Occupancy	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
375	Retail - Drive-Up	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30

45. COMMERCIAL BUILDINGS

Code	STRUCTURE TYPE Description	Basic Str. Code	BASEMENT				FIRST FLOOR				UPPER FLOOR			
			Wood Joist	Fire Resist.	Fire Proof	Pre-Fab Steel	Wood Joist	Fire Resist.	Fire Proof	Pre-Fab Steel	Wood Joist	Fire Resist.	Fire Proof	Pre-Fab Steel
381	Bowling Alley	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
382	Skating Rink	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
383	Health Spa	05	9.45	15.00	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
384	Swimming Pool, Indoor	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
385	Tennis Club, Indoor	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
386	Racquet Club, Indoor	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
387	Country Club	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
388	Club House	03	12.40	15.00	15.00	11.55	9.95	15.75	18.85	9.90	6.90	9.85	12.55	7.30
389	Country Club with Golf Course	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
391	Cold Storage Facility	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
392	Lumber Storage	07	9.35	11.55	11.55	9.35	8.50	10.75	13.30	8.75	6.15	6.80	8.95	6.20
395	Truck Terminal	04	12.15	15.00	15.00	12.25	11.20	16.10	19.45	9.90	8.15	10.10	12.60	7.25
396	Mini Warehouse	04	12.15	15.00	15.00	12.25	11.20	16.10	19.45	9.90	8.15	10.10	12.60	7.25
397	Office/Warehouse	04	12.15	15.00	15.00	12.25	11.20	16.10	19.45	9.90	8.15	10.10	12.60	7.25
398	Warehouse	04	12.15	15.00	15.00	12.25	11.20	16.10	19.45	9.90	8.15	10.10	12.60	7.25
399	Warehouse, Prefab	07	9.35	11.55	11.55	9.35	8.50	10.75	13.30	8.75	6.15	6.80	8.95	6.20
401	Manufacturing & Processing	04	12.15	15.00	15.00	12.25	11.20	16.10	19.45	9.90	8.15	10.10	12.60	7.25
405	Research & Development	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
610	Library	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
611	School	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
612	College or University	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
613	Dormitories	01	12.30	14.20	14.20	----	9.65	14.20	17.85	----	6.65	8.95	12.15	----
614	Churches	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
620	Auditorium	06	12.25	15.70	15.70	12.25	12.05	19.80	24.30	12.45	8.25	12.50	16.35	8.15
640	Hospital	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
650	Post Office	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
660	Police or Fire Station	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
670	Correctional Facilities	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
680	Cultural Facility	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
690	Rail/Bus/Air Terminal	05	9.45	14.90	14.90	11.20	11.40	18.00	21.20	11.75	7.95	11.10	14.10	7.65
710	Telephone Equipment Building	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
715	Telephone Service Garage	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
720	Radio/TV Transmitter Build	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25
725	Radio, TV, Motion Pic Studio	04	12.15	15.00	15.00	12.25	11.20	16.10	19.05	9.90	8.15	10.10	12.60	7.25

45.5.2. COMMERCIAL EXTERIOR WALL PRICING TABLE

EXTERIOR WALL MATERIALS		BASIC STRUCTURE CODES									
Code	Description	1	2	3	4	5	6	7	8	9	10
00	None	----	----	----	----	----	----	----	----	----	----
01	Brick	10.25	8.70	10.45	9.95	11.65	11.45	8.40	11.65	----	8.70
02	Frame	6.90	6.40	7.40	6.90	7.65	7.50	5.80	7.65	----	6.40
03	Concrete Block	8.90	7.95	8.75	8.15	9.80	9.35	6.40	9.80	----	7.95
04	Brick and Concrete Block	9.50	8.35	9.65	9.10	10.70	10.35	7.40	10.70	----	8.35
05	Tile	12.75	12.55	12.80	12.15	12.55	12.60	----	12.55	----	12.55
06	Masonry and Frame	8.50	7.50	8.95	8.40	9.65	9.45	7.05	9.65	----	7.50
07	Metal, Light	----	----	2.20	2.20	2.20	2.20	1.90	2.20	----	----
08	Metal, Sandwich	----	----	7.35	6.90	6.90	6.90	6.90	6.90	----	----
09	Concrete, Load Bearing	9.65	8.95	10.25	9.90	11.05	10.75	7.80	11.05	----	8.95
10	Concrete, Non-Load Bear	9.20	----	9.35	9.15	10.20	9.30	7.30	10.20	----	----
11	Glass	14.90	14.05	15.05	13.75	15.80	15.50	12.05	15.80	----	14.05
12	Glass and Masonry	13.65	12.75	13.60	12.50	15.25	16.15	----	15.25	----	12.75
13	Enclosure	----	----	----	2.00	----	----	2.10	----	----	----
14	Concrete, Tilt-Up	----	----	8.10	7.35	8.40	8.35	5.55	8.40	----	----
15	Solar Glass	22.60	22.40	23.95	22.15	26.30	25.85	----	26.30	----	22.40
16	Corrugated Asbestos	6.15	5.80	6.80	6.45	7.10	6.90	4.65	7.10	----	5.80
17	Native Stone	8.50	7.50	8.95	8.40	9.65	9.45	7.05	9.65	----	7.50

PART 4: REPLACEMENT COST

45.5.3. COMMERCIAL INTERIOR FINISH PRICING TABLE

Code	USE TYPES Description	INTER	NO	PARTITIONS		
		BASE RATE	INTER FINISH	NONE	BELOW NORM	ABOVE NORM
011	Apartment	18.15	-3.55	-6.90	-0.70	0.75
012	Hotel	25.50	-3.25	-10.30	-1.20	1.45
013	Motel	23.00	-3.05	-9.55	-1.20	1.45
021	Dormitory	26.45	-3.25	-10.45	-1.20	1.40
024	Dwelling Conversion - Multiple	17.70	-3.05	-6.65	-1.15	1.45
025	Dwelling Conversion - Office	17.70	-3.05	-6.65	-1.15	1.45
026	Dwelling Conversion - Sales	17.70	-3.05	-6.65	-1.15	1.45
027	Dwelling	17.70	-3.05	-6.65	-1.15	1.45
030	Laundromat or Dry Cleaners	20.38	-5.27	-2.28	- .78	0.91
031	Restaurant	38.80	-6.50	-8.85	-3.10	6.20
032	Department Store	20.20	-4.05	-3.90	-0.85	1.15
033	Discount Store/Market	14.05	-4.05	-1.35	-0.15	0.25
034	Retail Store	14.25	-4.05	-1.75	-0.60	0.70
035	Tavern or Bar	23.55	-4.05	-5.80	-1.95	3.15
036	Lounge	23.55	-4.05	-5.80	-1.95	3.15
037	Cafeteria	25.65	-3.30	-3.05	-1.10	1.65
038	Convenience Store	14.25	-4.05	-1.75	-0.60	0.70
039	Dairy Sales	15.70	-4.45	-1.75	-0.60	0.70
040	Barber or Beauty Shop	15.68	-3.56	-1.55	- .53	-0.62
041	Mini Warehouse	4.90	-0.70	-0.65	-0.50	0.65
042	Hangar	5.10	-0.70	-0.50	-0.15	0.25
043	Manufacturing	5.95	-0.70	-0.80	-0.30	0.65
044	Light Manufacturing	5.95	-0.70	-0.80	-0.30	0.65
045	Warehouse	4.90	-0.70	-0.65	-0.50	0.65
046	Auto Showroom or Office	15.95	-3.65	-2.70	-0.70	1.05
047	Auto Parts & Service	8.40	-0.70	-0.80	-0.30	0.50
048	Tennis Club	12.95	-0.70	-2.70	-0.30	0.50
049	Racquetball Court	24.75	-1.50	-13.60	-1.35	3.95
050	Skating Rink (Ice or Roller)	11.70	-1.85	-1.70	-0.60	0.70
051	Bank & Savings Institution	38.40	-6.95	-14.90	-2.30	2.65
052	Medical Center	38.60	-6.95	-15.95	-2.35	2.70
053	Office Building	30.20	-6.95	-11.65	-2.55	3.30
054	Nursing Home	34.30	-6.95	-12.15	-1.95	2.35
055	School	31.05	-6.95	-11.65	-0.50	1.95
056	Hospital	53.15	-6.95	-22.15	-2.00	2.20
057	Library	33.50	-6.95	-11.65	-1.50	1.75
058	Funeral Home	24.70	-3.65	-9.65	-2.35	3.05
059	Post Office	33.50	-6.95	-11.65	-1.50	1.75
061	Auditorium or Theatre	25.95	-3.45	-9.45	-1.75	2.60
062	Cinema	25.00	-3.45	-9.50	-2.20	2.80
063	Religious Institution	25.55	-3.45	-9.95	-2.30	3.05
064	Social or Fraternal Hall	23.85	-3.45	-8.60	-1.65	1.90
070	Service Station w/ Bays	14.40	-0.70	-5.95	-0.70	0.80
071	Service Sta, Retail Conversion	15.20	-0.70	-5.95	-0.70	0.80
072	Service Sta, Storage Conversion	14.40	-0.70	-5.95	-0.70	0.80
073	Service Station w/o Bays	21.75	-0.70	-5.95	-0.70	0.80
074	Car Wash - Manual	5.95	-1.50	-0.70	-0.25	0.30
075	Car Wash - Automatic	5.95	-1.50	-0.70	-0.25	0.30
081	Multi-Use - Apartment	17.85	-2.80	-7.10	-0.70	0.80
082	Multi-Use - Office	24.70	-3.65	-9.65	-2.35	3.05
083	Multi-Use - Sales	11.70	-1.85	-1.70	-0.60	0.70
084	Multi-Use - Storage	5.95	-1.50	-0.70	-0.25	0.30
085	Enclosure	18.35	-3.60	-6.65	-1.15	1.45
086	Support Area	5.95	-1.50	-0.70	-0.25	0.30
088	Restroom/Locker Room Facility	5.95	-1.50	-0.70	-0.25	0.30
090	Parking Garage	1.80	----	-0.65	-0.50	0.65
091	Unfinished Residential Basement	4.40	-1.50	-0.70	-0.25	0.35
095	Covered Mall	13.20	-4.05	-0.70	-0.25	0.30
100	Franchise Fast Food Restaurant	58.85	----	----	----	----
990	Parking, Upper Deck	0.10	----	----	----	----

45. COMMERCIAL BUILDINGS

45.5.4. COMMERCIAL HEATING, AIR CONDITIONING, AND PLUMBING PRICING TABLE

USE TYPES		HEATING				AIR CONDITIONING			PLUMBING		
		HOT AIR	HOT WATER	UNIT	NONE	CENTRAL	UNIT	NONE	BELOW NORM	ABOVE NORM	
Code	Description										NONE
011	Apartment	-1.45		-1.00	-2.20	-0.85	-2.55	-0.60	0.70		
012	Hotel	-1.65		-1.15	-2.45	-1.00	-4.35	-1.10	1.40		
013	Motel	-1.55		-1.15	-2.45	-1.00	-4.05	-1.05	1.40		
021	Dormitory	-1.65		-1.15	-2.30	-4.20	-4.20	-1.10	1.50		
024	Dwelling Conversion - Multiple	-1.55		-1.15	-2.30	-1.00	-2.55	-0.75	1.10		
025	Dwelling Conversion - Office	-1.55		-1.15	-2.30	-1.00	-2.55	-0.75	1.10		
026	Dwelling Conversion - Sales	-1.55		-1.15	-2.30	-1.00	-2.55	-0.75	1.10		
027	Dwelling	-1.55		-1.15	-2.30	-1.00	-2.55	-0.75	1.10		
030	Laundromat or Dry Cleaners	-1.70		-1.00	-2.70	-1.45	-2.97	-1.29	1.81		
031	Restaurant	-1.70		-1.00	-5.95	-1.45	-5.10	-1.70	2.50		
032	Department Store	-1.70		-1.00	-2.70	-1.45	-2.00	-1.75	0.65		
033	Discount Store/Market	-1.70		-1.00	-2.70	-1.45	-1.20	-0.30	1.20		
034	Retail Store	-1.70		-1.00	-2.70	-1.45	-1.15	-0.50	0.70		
035	Tavern or Bar	-1.70		-1.00	-2.70	-1.45	-5.10	-1.70	2.50		
036	Lounge	-1.70		-1.00	-2.70	-1.45	-5.10	-1.70	2.50		
037	Cafeteria	-1.20		-0.80	-2.70	-1.45	-3.30	-1.15	1.65		
038	Convenience Store	-1.70		-1.00	-2.70	-1.45	-1.15	-0.45	0.70		
039	Dairy Sales	-1.70		-1.00	-2.70	-1.45	-1.15	-0.45	0.70		
040	Barber or Beauty Shop	-1.70		-1.00	-2.70	-1.45	-2.51	-1.09	1.53		
041	Mini Warehouse	-1.65		-0.85		2.50	1.15	-0.75	-0.65	0.70	
042	Hangar	-1.65		-0.85		2.50	1.15	-0.75	-0.65	0.75	
043	Manufacturing	-1.65		-0.85		2.50	1.15	-0.85	-0.30	0.50	
044	Light Manufacturing	-1.65		-0.85		2.50	1.15	-0.85	-0.30	0.50	
045	Warehouse	-1.65		-0.85		2.50	1.15	-0.75	-0.65	0.70	
046	Auto Showroom or Office	-1.65		-0.85	-2.50	-1.15	-1.85	-0.60	0.70		
047	Auto Parts & Service	-1.65		-0.85	-2.50	-1.15	-1.05	-0.50	0.70		
048	Tennis Club	-1.65		-0.85	-2.50	-1.15	-1.85	-0.50	0.70		
049	Racquetball Court	-1.35		-0.60	-2.00	-1.05	-1.35	-0.35	1.35		
050	Skating Rink (Ice or Roller)	-1.55		-0.85	-2.65	-1.40	-1.15	-0.50	0.70		
051	Bank & Savings Institution	-2.35		-1.70	-3.05	-1.40	-3.15	-1.15	1.70		
052	Medical Center	-2.35		-1.70	-3.05	-1.40	-4.75	-1.75	2.45		
053	Office Building	-2.35		-1.70	-3.05	-1.40	-1.55	-0.25	1.95		
054	Nursing Home	-2.35		-1.70	-3.05	-1.40	-5.00	-1.45	1.95		
055	School	-2.35		-1.70	-3.05	-1.40	-3.25	-1.10	1.55		
056	Hospital	-2.35		-1.70	-3.05	-1.40	-7.95	-1.90	2.60		
057	Library	-2.35		-1.70	-3.05	-1.40	-2.60	-1.00	1.45		
058	Funeral Home	-2.30		-1.65	-3.05	-1.40	-2.20	-0.85	1.35		
059	Post Office	-2.35		-1.70	-3.05	-1.40	-3.25	-1.10	1.55		
061	Auditorium or Theatre	-2.65		-1.95	-3.05	-1.20	-3.25	-0.75	1.05		
062	Cinema	-2.65		-1.95	-3.05	-1.20	-2.35	-0.60	0.70		
063	Religious Institution	-2.65		-1.95	-3.05	-1.20	-2.50	-0.85	1.35		
064	Social or Fraternal Hall	-2.65		-1.95	-3.05	-1.20	-2.60	-1.00	1.45		
070	Service Station w/ Bays	-1.50		-0.25		2.50	1.15	-4.30	-1.45	0.80	
071	Service Sta, Retail Conversion	-1.50		-0.25		2.50	1.15	-4.30	-1.45	0.80	
072	Service Sta, Storage Conversion	-1.50		-0.25		2.50	1.15	-4.30	-1.45	0.80	
073	Service Station w/o Bays	-1.50		-0.25		2.50	1.15	-11.65	-5.95	2.20	
074	Car Wash - Manual	-1.55		-0.85		2.45	1.10	-0.70	-0.25	0.30	
075	Car Wash - Automatic	-1.55		-0.85		2.45	1.10	-0.70	-0.25	0.30	
081	Multi-Use - Apartment	-1.45		-1.05	-2.15	-0.85	-2.20	-0.65	0.70		
082	Multi-Use - Office	-2.30		-1.65	-3.00	-1.40	-2.20	-0.85	1.35		
083	Multi-Use - Sales	-1.55		-0.85	-2.65	-1.40	-1.15	-0.50	0.70		
084	Multi-Use - Storage	-1.55		-0.85		2.45	1.10	-0.70	-0.25	0.30	
085	Enclosure	-1.55		-1.15	-2.30	-0.85	-2.55	-0.75	1.10		
086	Support Area	-1.55		-0.85		2.45	1.10	-0.70	-0.25	0.30	
088	Restroom/Locker Room Facility	-1.55		-0.85		2.45	1.10	-0.70	-0.25	0.30	
090	Parking Garage	----		----	----	----	----	----	----	----	
091	Unfinished Residential Basement	----	1.55	1.55	0.75		2.45	1.15	-0.70	-0.25	0.35
095	Covered Mall	-1.70		-1.00	-2.70	-1.45	----	----	----	----	
100	Franchise Fast Food Restaurant	----		----	----	----	----	----	----	----	
990	Parking, Upper Deck	----		----	----	----	----	----	----	----	

PART 4: REPLACEMENT COST

45.5.5. COMMERCIAL BUILDING OTHER FEATURES PRICING TABLE

BUILDING OTHER FEATURES Description	Unit of Code Measure	Rate
Air Conditioning, central	AC1 SqFt	2.65
Air Conditioning, unit	AC2 SqFt	1.40
Aerial Walkway	AW1 SqFt	160.00
Atrium, cover only	AT1 SqFt	25.90
Atrium, walls (square foot of wall area)	AT2 SqFt	9.35
Balcony	BA1 SqFt	2.60
Bank Drive-In, canopy	BC1 SqFt	23.30
Bank Drive-In, teller booth	BC2 SqFt	59.95
Bank Drive-In, window	BC3 Each	6,250.00
Bank Night Deposit Chute	BE6 Each	5,350.00
Bank Pneumatic Tubes	BE0 Each	530.00
Bank Service Window	BE8 Each	5,770.00
Bank Vault, money, no door	BE1 SqFt	83.50
Bank Vault, record storage, no door	BE2 SqFt	25.20
Bank Vault Door, money, circular shape	BE3 Each	5,970.00
Bank Vault Door, money, rectangular shape	BE4 Each	25,900.00
Bank Vault Door, record storage only	BE5 Each	2,050.00
Basement Top	BT1 SqFt	5.95
Built-In	BI1 Each	100.00
Cooler, chiller	CF1 SqFt	5.80
Cooler, freezer	CF2 SqFt	7.30
Cooler, sharp freeze	CF3 SqFt	9.90
Canopy Roof, low cost	CP5 SqFt	5.05
Canopy Roof, average	CP6 SqFt	6.20
Canopy Roof, good	CP7 SqFt	5.05
Computer Room Floor	CR1 SqFt	9.10
Computer Room Air Control	CR2 SqFt	6.00
Computer Room Fire Suppression	CR3 SqFt	7.75
Carport	RC1 SqFt	6.20
Covered Mall	CM1 SqFt	19.40
Craneways	CW1 LnFt	28.45
Dock Level Floor	DH1 SqFt	0.85
Elevator - Electric Freight	EL1 Each	See
Elevator - Electric Passenger	EL2 Each	Elevator
Elevator - Hydraulic Freight	EL3 Each	Pricing
Elevator - Hydraulic Passenger	EL4 Each	Table
Escalator, stair width 32"	EL5 Ft Rise	5,200.00
Escalator, stair width 48"	EL6 Ft Rise	6,200.00
Enclosed Entry	EE1 SqFt	17.45
Fireplace with 1 opening	FI1 Each	2,350.00
Fireplace with 2 openings	FI2 Each	3,500.00
Fireplace with 3 openings	FI3 Each	4,650.00
Garage, attached, frame, finished	RA1 SqFt	11.00
Garage, attached, masonry, finished	RA2 SqFt	14.05
Garage, attached, frame, unfinished	RA3 SqFt	8.80
Garage, attached, masonry, unfinished	RA4 SqFt	11.24
Greenhouse, economy	GH1 SqFt	6.40
Greenhouse, average	GH2 SqFt	8.20
Greenhouse, good	GH3 SqFt	9.55
Hoists, single plunger	HS1 Each	2,950.00
Hoists, double plunger	HS2 Each	3,900.00

BUILDING OTHER FEATURES Description	Unit of Code Measure	Rate
Loading Dock, steel/concrete	LD1 SqFt	7.75
Loading Dock, wood	LD2 SqFt	5.25
Loading Dock, interior	LD3 SqFt	16.85
Truck and Train Wells	LD4 SqFt	9.25
Dock Levelers	LD5 SqFt	3,800.00
Miscellaneous Structure	MS1 Each	0.90
Open Areas, high rise apartments & hotels	OA1 SqFt	4.80
Open Areas, garden apartments, motels & dwellings	OA2 SqFt	4.40
Open Areas, stores & restaurants	OA3 SqFt	5.15
Open Areas, industrial & warehouses	OA4 SqFt	5.15
Open Areas, banks & office building low rise	OA5 SqFt	6.30
Open Areas, theaters & auditoriums	OA6 SqFt	6.80
Open Areas, light metal buildings	OA7 SqFt	3.70
Open Areas, office buildings high rise	OA8 SqFt	6.45
Overhead Doors, wood/metal	OD1 SqFt	8.95
Overhead Doors, roll steel	OD2 SqFt	14.20
Overhead Doors, wood/metal with motor and operator	OD3 SqFt	11.90
Overhead Doors, roll steel with motor and operator	OD4 SqFt	18.90
Patio, wood	RT1 SqFt	3.50
Patio, concrete	RT2 SqFt	1.20
Patio, stone or tile, sand base	RT3 SqFt	1.40
Patio, stone or tile, concrete base	RT4 SqFt	3.20
Patio, brick	RT5 SqFt	2.95
Patio, masonry stoop	RT6 SqFt	6.00
Porch, open	PP1 SqFt	14.50
Porch, screened	PP2 SqFt	19.90
Porch, enclosed	PP4 SqFt	22.65
Porch, open, upper deck	PP5 SqFt	9.05
Porch, screened, upper deck	PP6 SqFt	12.30
Porch, enclosed, upper deck	PP8 SqFt	13.60
Roof, monitor	MR1 SqFt	2.50
Roof, high bay	MR2 SqFt	2.50
Skating Rink, indoor, ice skating	SK1 SqFt	9.80
Sprinkler System, wet pipe	SS1 SqFt	1.15
Sprinkler System, dry pipe	SS2 SqFt	1.30
Store Front, wood frame	SF1 LnFt	64.75
Store Front, avg metal frame	SF2 LnFt	130.00
Store Front, elaborate	SF3 LnFt	195.00
Swimming Pool, indoor	RPS SqFt	32.40
Tunnel, grain elevator	TU1 LnFt	225.00
Utility Building, frame	RS1 SqFt	6.80
Utility Building, metal	RS2 SqFt	7.60
Utility Building, brick/stone	RS3 SqFt	8.25

45.5.6. COMMERCIAL OTHER BUILDING AND YARD IMPROVEMENTS PRICING TABLE

OBY IMPROVEMENTS				OBY IMPROVEMENTS			
Description	Code	Unit of Measure	Rate	Description	Code	Unit of Measure	Rate
Air Conditioning, central	AC1	SqFt	2.65	Greenhouse, economy	GH1	SqFt	↓
Air Conditioning, unit	AC2	SqFt	1.40	Greenhouse, average	GH2	SqFt	↓
Annex, wood crib	AN1	Bu	Table	Greenhouse, good	GH3	SqFt	↓
Annex, concrete	AN2	Bu	Follows	Kioska (Fotomat, etc.)	KF1	SqFt	120.00
Bank Drive-In, canopy	BC1	SqFt	23.30	Light, mercury vapor, wall mounted	LT1	Each	210.00
Bank Drive-In, teller booth	BC2	SqFt	59.95	Light, incandescent, wall mounted	LT2	Each	63.35
Boat Dock, light wood deck, light post	BD1	SqFt	12.45	Light, fluorescent, pole & bracket	LT3	Each	570.00
Boat Dock, medium wood deck, wood girders	BD2	SqFt	18.70	Light, incandescent, pole & bracket	LT4	Each	500.00
Boat Dock, heavy wood deck, heavy piling	BD3	SqFt	31.15	Light, mercury vapor, pole & bracket	LT5	Each	645.00
Boat House, frame or concrete	BB1	SqFt	7.05	Miscellaneous Structure	MS1	Each	0.90
Boat House, masonry	BB2	SqFt	9.30	Paving, asphalt	PA1	SqFt	1.15
Boat Slip, economy	BS1	Each	3,650.00	Paving, concrete,	PA2	SqFt	2.15
Boat Slip, average	BS2	Each	4,550.00	4" without wire mesh			
Boat Slip, good	BS3	Each	5,450.00	Paving, concrete,	PA3	SqFt	2.35
Bulkhead	BK1	LnFt	100.00	5"-6" with wire mesh			
Canopy Roof, low cost	CP5	SqFt	5.05	Plumbing Fixture	PB1	Each	400.00
Canopy Roof, average	CP6	SqFt	8.40	Railroad Trackage (spurs)	RR1	LnFt	54.40
Canopy Roof, good	CP7	SqFt	12.30	Restroom Structure, frame/concrete block	TR1	SqFt	20.70
Carport	RC1	SqFt	5.05	Restroom Structure, brick or stone	TR2	SqFt	24.60
Drive House, wood & metal Good quality	DH1	SqFt	42.50	Service Station Attendant's booth steel or glass on masonry	GS1	SqFt	77.70
Drive House, wood & metal Average quality	DH2	SqFt	30.25	Service Station Attendant's booth stucco or glass on frame	GS2	SqFt	62.15
Drive House, wood & metal Low Cost quality	DH3	SqFt	18.00	Shed, machinery	SH1	SqFt	6.40
Drive House, concrete Good quality	DH4	SqFt	54.00	Shed, aluminium	SH2	SqFt	7.85
Drive House, concrete Average quality	DH5	SqFt	41.00	Shed, finished metal	SH3	SqFt	11.20
Drive House, unique Low Cost quality	DH0	SqFt	20.00	Shed, quonset	SH4	SqFt	9.15
Drive-In Theater Screen	DT1	SqFt	12.15	Shed, lumber, frame, 2 sides open	SH5	SqFt	3.95
Elevators, wood crib	EL1	Bu	Table	Shed, lumber, frame, 4 sides open	SH6	SqFt	3.55
Elevators, concrete	EL2	Bu	Follows	Scales, platform	CA1	Pounds	See
Fence, chain link	RF1	SqFt	See	Scales, truck	CA2	Pounds	Res/Ag
Fence, picket	RF2	SqFt	Res/Ag	Scales, cattle	CA3	Pounds	OBY
Fence, stockade	RF3	SqFt	OBY				Tables
Fence, post & rail	RF4	SqFt	Pricing	Skating Rink, outdoor, ice skating	SK1	SqFt	9.80
Fence, basketweave	RF5	SqFt	Tables	Sprinkler System, wet pipe	SS1	SqFt	1.15
Fence, brick or masonry	RF6	SqFt	5.00	Sprinkler System, dry pipe	SS2	SqFt	1.30
Fence, ornamental iron	RF7	SqFt	5.00	Swimming Pool, outdoor, commercial	RP5	SqFt	36.75
Fence, barbed wire - 4 strand	RF8	LnFt	1.90	Tanks, wooden	TA1	Bu	Table
Fence, stock yard corrals	RF9	LnFt	6.20	Tanks, corrugated steel	TA2	Bu	Follows
Fence, pipe & post	RF0	LnFt	8.64	Tanks, bolted steel hopper	TA3	Bu	↓
Flat Storage, wood	FS1	Bu	Table	Tanks, welded steel	TA4	Bu	↓
Flat Storage, metal	FS2	Bu	Follows	Tanks, bolted steel	TA6	Bu	↓
Fuel Storage Tank, underground	AU1	Gal	See	Tanks, underground fiberglass	TA7	Gal	↓
Fuel Storage Tank, aboveground	AU2	Gal	Res/Ag	Tennis Court, asphalt	TC1	Each	15,620.00
Fuel Storage Tank, horizontal pressure	AU3	Gal	OBY	Tennis Court, concrete	TC2	Each	18,780.00
Garage, detached, frame, finished	RG1	SqFt	Pricing	Tennis Court, clay	TC3	Each	10,960.00
Garage, detached, masonry, finished	RG2	SqFt	Tables	Tunnel, grain elevators	TU1	LnFt	225.00
Garage, detached, frame, unfinished	RG3	SqFt	↓	Utility Building, frame	RS1	SqFt	5.75
Garage, detached, masonry unfinished	RG4	SqFt	↓	Utility Building, metal	RS2	SqFt	7.60
			↓	Utility Building, brick/stone	RS3	SqFt	8.85

PART 4: REPLACEMENT COST

45.5.7. COMMERCIAL ELEVATOR PRICING TABLES

ELECTRIC FREIGHT - EL1

Capacity: Speed	2000	4000	6000	8000	10000	12000	14000	16000	18000	20000
100	41000	44400	47800	51150	54550	57950	61350	64750	68150	71500
150	44200	48350	52550	56750	60900	65100	69300	73500	77650	81850
200	47350	52350	57300	62300	67300	72250	77250	82200	87200	92200
250	50550	56300	62100	67850	73650	79400	85200	90950	96750	102500
300	53700	60300	66850	73400	80000	86550	93150	99700	106250	112850
350	56900	64250	71600	79000	86350	93700	101100	108450	115800	123150
400	60050	68250	76400	84550	92700	100850	109000	117200	125350	133500

ELECTRIC PASSENGER - EL2

Capacity: Speed	1500	2000	2500	3000	3500	4000	4500	5000
100	35500	40500	45000	50000	54500	59500	64000	69000
150	39500	44500	49500	54000	59000	63500	68500	73000
200	44000	48500	53500	58500	63000	68000	72500	77500
250	48000	53000	57500	62500	67500	72000	77000	81500
300	52500	57000	62000	67000	71500	76500	81000	86000
400	94000	100000	105000	110000	115000	121000	126000	131000
500	109000	115000	122000	128000	135000	141000	147000	154000
600	124000	131000	139000	146000	154000	161000	168000	176000
700	139000	147000	156000	164000	173000	181000	190000	198000
800	154000	163000	173000	182000	192000	201000	211000	220000
900	168000	179000	190000	200000	211000	221000	232000	243000
1000	183000	195000	207000	218000	230000	242000	253000	265000
1100	198000	211000	224000	236000	249000	262000	274000	287000
1200	213000	227000	241000	254000	268000	282000	296000	309000
1300	228000	243000	257000	272000	287000	302000	317000	332000
1400	243000	259000	274000	290000	306000	322000	338000	354000

HYDRAULIC FREIGHT - EL3

Capacity: Speed	2000	4000	6000	8000	10000	12000	14000	16000	18000	20000
50	13700	18900	24100	29200	34400	39600	44800	50000	55280	60520
100	19000	24700	30400	36100	41900	47600	53300	59000	64810	70440
150	24300	30500	36800	43000	49300	55500	61800	68000	74350	80650
200	29600	36300	43100	49900	56700	63500	70300	77000	83890	90690

HYDRAULIC PASSENGER - EL4

Capacity: Speed	1500	2000	2500	3000	3500	4000	4500	5000
50	15000	17500	20000	22500	25000	27500	30100	32600
75	17700	20400	23100	25800	28500	31300	34000	36700
100	20400	23300	26200	29100	32100	35000	37900	40800
125	23100	26200	29300	32400	35600	38700	41800	44900
150	25800	29100	32400	35800	39100	42400	45700	49000
200	31300	35000	38700	42400	46100	49800	53500	57200

45. COMMERCIAL BUILDINGS

45.5.8. GRAIN ELEVATORS & ANNEXES

Capacity (Bushels)	Wood/Metal		Concrete	
	Elevator EL1	Annex AN1	Elevator EL2	Annex AN2
10,000	7.69			
15,000	6.43			
20,000	5.68			
25,000	5.17			
30,000	4.79	2.98		
40,000	4.25	2.61		
50,000	3.89	2.36		
60,000	3.62	2.17	4.37	2.56
75,000	3.33	1.96	4.06	2.36
100,000	2.99	1.73	3.70	2.13
150,000	2.59	1.45	3.27	1.85
200,000	2.35	1.28	3.02	1.69
250,000	2.19	1.17	2.85	1.57
300,000	2.07	1.08	2.72	1.49
400,000			2.54	1.38
500,000			2.42	1.30
600,000			2.33	1.24
750,000			2.23	1.17
1,000,000			2.11	1.10
1,500,000			1.98	1.01
2,000,000			1.90	0.96

45.5.9. FLAT STORAGE

Capacity (Bushels)	Wood FS1	Steel FS2
50,000	0.84	0.78
60,000	0.71	0.69
75,000	0.63	0.64
100,000	0.57	0.60
150,000	0.53	0.57
200,000	0.48	0.53
250,000	0.44	0.51
300,000	0.41	0.49
400,000	0.38	0.47
500,000	0.34	0.44
600,000	0.30	0.41
750,000	0.27	0.40
1,000,000	0.26	0.39
1,500,000	0.24	0.38

45.5.10. TANKS

Capacity (gallons)	TA1	TA2	TA4	TA6	TA7
	Wood Tank	Galv Steel	Welded Steel	Bolted Steel	Undgrd Fibgls
500	4.52	1.45		3.46	3.71
750	3.74	1.23		2.84	2.73
1,000	3.28	1.10		2.46	2.24
1,500	2.73	0.95		2.02	1.75
2,000	2.40	0.85		1.76	1.50
3,000	2.01	0.74		1.44	1.25
4,000	1.78	0.68		1.25	1.13
5,000	1.62	0.63		1.13	1.06
7,500	1.37	0.56		0.93	0.96
10,000	1.22	0.52	1.40	0.81	0.91
15,000	1.05	0.47	1.17	0.67	0.86
20,000	0.95	0.45	1.03	0.59	0.84
30,000	0.82	0.41	0.87	0.49	0.81
50,000	0.70	0.38	0.70	0.39	0.79
75,000	0.62		0.60	0.33	
100,000	0.57		0.54	0.29	
150,000	0.52		0.46	0.24	
200,000	0.49		0.42	0.22	
300,000			0.37	0.19	
400,000			0.34	0.17	
500,000			0.31	0.16	
750,000			0.28	0.14	
1,000,000			0.26	0.12	
2,000,000			0.23		
3,000,000			0.21		
5,000,000			0.19		
7,500,000			0.18		
10,000,000			0.18		

45.5.11. BOLTED INDUSTRIAL BINS (HOPPERS)

Diameter Height (Feet)	TA3				
	9	12	15	18	21
16	4610	6080	7960	10260	12990
24	5210	7150	9640	12680	16270
32	5820	8220	11310	15090	19550
40	6420	9290	12990	17500	22830
48	7020	10360	14660	19910	26120
56	7630	11440	16340	22320	29400

PART 4: REPLACEMENT COST

COMMERCIAL / INDUSTRIAL MANUAL PRICING WORKSHEET

MONTANA MASS APPRAISAL SYSTEM COMMERCIAL/INDUSTRIAL MANUAL PRICING WORKSHEET

STRUCT TYPE _ _ _	EXTERIOR/INTERIOR LINE							
BASIC STR CODE _ _	611	612	613	614	615	616	617	618
LEVEL.....								
BUILDING BASE RATE								
EXTERIOR WALL RATE								
PAR.....								
WALL HEIGHT.....								
ADJUSTED WALL RATE								
TOTAL EXTERIOR RATE								
USE TYPE.....								
INTERIOR BASE RATE								
ADJUSTMENTS:								
INTERIOR FINISH %								
ADJUST FINISH RATE								
PARTITIONS.....								
HEAT.....								
AIR CONDITIONING..								
PLUMBING.....								
TOTAL INTERIOR RATE								
TOTAL RATE.....								
AREA.....								
UNADJUSTED VALUE...								
TOTAL BOF's.....								
UNADJUSTED RCN.....								
PERCENT GOOD.....								
BASE RCNLD								

SUB-TOTAL BASE RCNLD		BUILDING OTHER FEATURES		OTHER BUILDING&YARD IMPROVEMENTS		
		Line	RCN	RCN	% GOOD	RCNLD
x PERCENT COMPLETE..				701		
x GRADE FACTOR.....		601		702		
x ECF.....		602		703		
x COUNTY INDEX.....		603		704		
x PERCENT OWNERSHIP		604		705		
		605		706		
BUILDING RCNLD.....		606		SUB-TOTAL.....		
TOTAL OBY VALUE.....		607		x ECF.....		
ADJ TOTAL OTHER VALUE		608		x PERCENT OWNERSHIP		
TOTAL VALUE				TOTAL OBY VALUE.....		

46. UNIT-IN-PLACE COSTS

TABLE OF CONTENTS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE
46.1.	INTRODUCTION	1	46.6.9.	DOORS	11
46.2.	PROJECT SIZE	1	46.6.10.	COLD STORAGE INSULATION	11
46.3.	QUALITY OF CONSTRUCTION	2	46.6.11.	WINDOWS	12
46.4.	QUALITY GRADE AND FACTORS	2	46.6.12.	STAIRS	12
46.5.	DESIGN	3	46.6.13.	ROOF VENTILATION	12
46.6.	SCHEDULES	3	46.6.14.	BOILERS	13
46.6.1.	EXCAVATION AND FOUNDATION CONSTRUCTION	3	46.6.15.	STEAM GENERATORS	14
46.6.2.	CONCRETE	4	46.6.16.	WATER STORAGE TANKS	14
46.6.3.	STEEL	5	46.6.17.	STACKS	15
46.6.4.	TIMBER	5	46.6.18.	RAILROAD SIDING	15
46.6.5.	WALL CONSTRUCTION	5	46.6.19.	RAILROAD TRACK SCALES	15
46.6.6.	FLOOR CONSTRUCTION	7	46.6.20.	PAVING	15
46.6.7.	ROOF CONSTRUCTION	8	46.6.21.	TRUCK SCALES	15
46.6.8.	INTERIOR FINISH	10	46.6.22.	WOVEN WIRE FENCE	16
			46.6.23.	UTILITY PIPING	16

46.1. INTRODUCTION

Unit-in-Place Cost Tables have been included in the *Montana Appraisal Manual* to be used as a guide by the appraiser in making unit-in-place adjustments to the existing Pricing Schedules.

The Pricing Schedules in the Manual have been developed by applying unit-in-place costs in the construction of various hypothetical or model buildings. It is advisable to use these Pricing Schedules whenever feasible limiting the application of the Unit-in-Place Cost Tables to special purpose type buildings which are not readily adaptable to the existing Schedules.

Making a complete valuation by using unit-in-place costs is a job that requires both a great deal of time, technical knowledge, and skill. An appraiser must have a thorough understanding of all aspects of construction especially those factors which tend to influence overall costs, and an equally thorough understanding of the extent to which these factors are taken into account in the particular unit-in-place costs which are used. Among the most significant variables which the appraiser must consider are basic material prices,

the quality of material, the cost of labor, labor-efficiency, the quality of workmanship, profit and overhead, and the extent of pre-job and on-the-job architect and engineering fees.

The Unit-in-Place Cost Tables in the Manual have been developed to include (1) volume prices of average quality materials; (2) the cost of union labor with labor-efficiency typical of average quality workmanship; (3) normal contractor overhead and profit; and (4) normal architect fees. The Cost Tables can be effectively applied to conventionally designed construction conforming with these conditions. However, the effective application of the Cost Tables to types of construction which vary from these conditions is solely dependent upon the ability of the appraiser to determine the extent of the variations and to adjust the Replacement Cost accordingly.

Among the factors which the appraiser must most frequently consider are the size of the project, the overall quality of construction, and the variations in design.

46.2. PROJECT SIZE

The material prices and labor-efficiency considered in the development of the Unit-in-Place Cost Tables are those typical of sizeable

construction projects involving carload lots of materials, and labor-efficiency averaged over an extended construction period and under normal

PART 4: REPLACEMENT COST

conditions. When using the Unit-in-Place Cost Tables on smaller commercial type projects, it is necessary to account for the variations in the basic

material prices and labor-efficiency by adding 10-30% to the Base Cost Tables.

46.3. QUALITY OF CONSTRUCTION

The Unit-in-Place Cost Tables reflect average quality material and workmanship. Both of these factors may vary considerably, resulting in a grade of construction ranging from very poor to very high quality. The following Quality Grade Specifications are provided to assist the appraiser in selecting the proper Grade.

Very Good to Excellent Grade Very high quality of material and excellent quality of workmanship throughout. Specially built construction requiring architect fees to cover both design and supervision, and engineering fees commensurate with the type of construction ranging from normal fees at the lower level of this Grade range to extensive fees at the Excellent level.

Good Grade Above average quality materials and a good quality workmanship throughout, requiring architect fees.

Average Grade Average quality materials and workmanship throughout, conforming with specifications of the Unit-in-Place Cost Tables as developed in the Manual.

Fair Grade Below average quality materials and fair to poor quality workmanship throughout, not requiring architect fees.

Low Cost Grade Very cheap grade of materials, usually "culls" and "seconds," and a very poor quality of workmanship resulting from unskilled, inexperienced, "do-it-yourself" type labor, not requiring architect fees.

Generally, the quality of materials and workmanship is fairly consistent through the construction of a specific building. It is therefore usually more feasible to weigh each component and to make a composite judgement of the overall Quality Grade.

46.4. QUALITY GRADE AND FACTORS

The commercial system uses an alphabetical grading scale with "A" as average quality of construction, with a range of grades from a low of "L" (low cost) to a high of "E" (excellent construction). A plus (+) and minus (-) adjustment is allowed within each category. The relative value ranges are indicated by the following table.

<u>Grade</u>		<u>Value Range</u>
L - Low Cost	-	.40
	+	.60
F - Fair	-	.70
	+	.85
A - Average	-	.92
	+	1.08
G - Good	-	1.17
	+	1.35
V - Very Good	-	1.45
	+	1.67
E - Excellent	-	1.85
	+	2.50

46.5. DESIGN

Since unit-in-place costs are developed from basic construction components, they obviously cannot include an allowance for variations in design. Labor-efficiency in construction varies considerably from building to building depending upon its particular design. In elaborate or specially designed buildings, it is not uncommon for the cost of putting a specific unit in place to be two to three times as great as putting the same unit in place in a conventionally designed building, resulting in a proportionately higher cost. In computing the Replacement Cost, it is necessary to

account for this variation in labor-efficiency and also to account for the higher architect and engineering fees caused by the special design.

This adjustment, in addition to those for other variations, must be made by applying a Design Factor to the total Replacement Cost. The selection of the proper Design Factor is largely a product of the experience and sound judgment of the appraiser. The appraiser must have the ability to analyze variable construction components and to determine the influence of each upon the overall cost.

46.6. SCHEDULES

46.6.1. EXCAVATION AND FOUNDATION CONSTRUCTION

BULK EXCAVATION

Bulk Excavation-Left on Site	Per Cu. Ft.	0.23
Normal Haul-Small Quantities	Per Cu. Ft.	0.33
Normal Haul-Large Quantities	Per Cu. Ft.	0.26
Caisson Cost-Including Excavation Concrete,		
Casing Complete	Per Cu. Ft.	16.85
Rock Excavation	Per Cu. Ft.	0.29

TRENCH EXCAVATION

Trench Excavation including Backfill, Normal Haul		
Trenches 3' deep	Per C/Y	4.93
Trenches 4' deep	Per C/Y	4.93
Trenches 5' deep	Per C/Y	4.93
Trenches 6' deep	Per C/Y	4.24
Trenches 8' deep	Per C/Y	4.24
Trenches 10' deep	Per C/Y	3.14

2" WOOD SHEET PILING
PER S/F

Sheet Piling Trenches 5' to 8' deep	4.30
Sheet Piling Trenches 10' to 15' deep	6.05
Bsmts. or Founds. 8' to 12' deep	4.95
Bsmts. or Founds. 14' to 20' deep	6.85

STEEL SHEET PILING
QUANTITY COST PER S/F

Small	Average	Large
27.85	19.00	14.55
If Pulled and Reused-Deduct 45%		

WOOD PILES

Size of Piles		
12" Butts	per L/F	11.40
14" Butts	per L/F	11.65
16" Butts	per L/F	12.05
Treated Piles - Add 2.25 per L/F		

PRE-STRESSED, PRE-CAST CONCRETE PILES

12"	per L/F	12.35
16"	per L/F	15.85
20"	per L/F	21.55

STEEL PIPE PILES - CONCRETE FILLED

10"	per L/F	30.40
12"	per L/F	37.00
14"	per L/F	48.00

PART 4: REPLACEMENT COST

CONCRETE POURED IN PLACE STEP - TAPERED STEEL PILES (RAYMOND)

12"	per L/F	13.40
16"	per L/F	15.50

STEEL "H" PILES

8" x 8" - 36#	per L/F	14.95
10" x 10" - 42#	per L/F	17.20
- 57#	per L/F	21.90
12" x 12" - 53#	per L/F	21.20
- 74#	per L/F	27.80
14" x 14" - 73#	per L/F	27.95
- 89#	per L/F	32.95
- 102#	per L/F	37.45
- 117#	per L/F	41.25

FOUNDATION CONCRETE

Concrete for Foundations, Footings, Grade
Beams & Walls that can be placed by Transit
Mixer - PSI 4,000 lbs. av. Per C/F 1.75

FOUNDATION FORMS

Footings Forms	per S/F	2.60
Column Pier Forms	per S/F	4.15
Wall Forms to 8' high	per S/F	3.80
Wall Forms to 14' high	per S/F	4.30
Wall Forms to 22' high	per S/F	5.35
Wall Forms for Radial Concrete Walls - ADD 45% to 90%		

NORMAL FOUNDATION WALL & FOOTING

Cost of Foundation to Grade for normal buildings
(without Basement) including excavation, backfill,
forms and reinforcing steel, per L/F 1'-0" high.

8" Conc. Wall & Conc. Footing	per L/F	5.35
12" Conc. Wall & Conc. Footing	per L/F	7.85
16" Conc. Wall & Conc. Footing	per L/F	8.60
20" Conc. Wall & Conc. Footing	per L/F	9.50
8" Conc. Block Wall & Footing	per L/F	6.95
12" Conc. Block Wall & Footing	per L/F	8.35

WATERPROOFING BASEMENT WALLS

Membrane 1 Ply Fabric	per S/F	0.76
Membrane 2 Ply Fabric	per S/F	0.96
Membrane 3 Ply Fabric	per S/F	1.10
Integral Waterproofing in Concrete Mix	per C/Y	2.28

46.6.2. CONCRETE

CONCRETE ONLY PER C/Y

Price variations depend on quantities and whenever
placed by transit mixer wheeled, or hoisted and
wheeled. Add excavation, backfill, forms &
reinforced steel.

Mass - Mats & Heavy Slabs	16.30
Walls - Heavy	13.95
Walls - Light	13.05
Structural - Heavy	21.85
Structural - Light	18.70
Foundation - Heavy	8.05
Foundation - Light	7.15

REINFORCED CONCRETE WALLS PER S/F SURFACE

Including Forms & Reinforcing Steel.
Wall Height to Top of Footing.

Thick	Plain Walls	Pilastered Walls
4"	8.55	11.65
6"	9.20	12.00
8"	9.85	12.65
10"	10.50	13.60
12"	11.20	14.55
14"	11.85	15.50
16"	12.50	16.45
18"	13.15	17.40
20"	13.80	18.35
24"	15.20	20.15

46. UNIT-IN-PLACE COSTS

REINFORCED CONCRETE COLUMNS PER L/F

Size	Round	Square	Size	Round	Square	Size	Round	Square	Size	Round	Square
12"	25.90	34.55	18"	-----	48.40	24"	59.65	69.15	30"	87.40	95.40
14"	-----	39.15	20"	45.90	54.50	26"	-----	78.45	32"	-----	98.75
16"	34.20	43.15	22"	-----	61.70	28"	-----	84.15	36"	119.45	115.95

46.6.3. STEEL

STRUCTURAL STEEL FRAMING PER LB

Light Weight-Small Quantity	1.20
Light Weight-Large Quantity	0.82
Heavy Weight-Small Quantity	1.58
Heavy Weight-Large Quantity	1.33
Anglechord Steel Trusses-Light	0.62
Pressed Steel Trusses-Heavy	0.70
Open-Web Steel Joist-Light	0.69
Open-Web Steel Joist-Heavy	0.73

ELECTRIC WELDED REINFORCING MESH PER S/F

Slabs, Floors & Walks - 10 ga.	0.50
Slabs, Floors & Walks - 8 ga.	0.70
Slabs, Floors & Walks - 6 ga.	0.90
Slabs, Floors & Walks - 4 ga.	1.15
In Walls ADD 0.15 per S/F	

REINFORCING STEEL PER LB

Footings & Slabs-Light	1.02
Footings & Slabs-Heavy	0.98
Walls, Cols. & Beams-Light	1.36
Walls, Cols. & Beams-Heavy	1.18

46.6.4. TIMBER

Timber Framing 4" x 12"	Per Bd. Ft.	1.30
Treated Timber Framing	Per Bd. Ft.	1.45
Timber Trusses	Sq. Ft. Covered Area	3.05
Glued Laminated Timbers (Light) 5" x 12"	Per Ln. Ft.	9.15
Glued Laminated Timbers (Heavy) 6" x 30"	Per Ln. Ft.	29.40

46.6.5. WALL CONSTRUCTION

EXTERIOR STUDS PER S/F SURFACE

Including Plates & Framing for Normal Openings	
2" x 4" 16" O.C., 8' high	0.70
2" x 6" 16" O.C., 8' high	0.75

INSULATION-NON RIGID TYPE PER S/F SURFACE

Fiberglass-Kraft Faced One Side, 12" Thick	0.90
Fiberglass-Kraft Faced One Side, 6" Thick	0.50
Fiberglass-Kraft Faced One Side, 3½" Thick	0.35
Urethane Foam-¾" Thick	2.05

PART 4: REPLACEMENT COST

SHEATHING PER S/F SURFACE

	Walls	Roof
1" Wood-Horizontal	0.95	0.95
1" Wood-Diagonal	1.00	1.00
3/8" Plywood	0.70	0.00
1/2" Plywood	0.75	0.75
5/8" Plywood	0.90	0.90
3/4" Plywood	0.00	1.00

INSULATED WALL PANELS PER S/F SURFACE

1½" Insulation & Galvanized Steel Interior	
Galvanized Steel Exterior	7.10
Aluminum Exterior	6.20
Protected Metal Exterior	6.60
Porcelain on Aluminum Exterior	13.95
Stainless Steel Exterior-26 Ga.	8.25
Colored Aluminum Exterior	6.45

SIDING PER S/F SURFACE

Cedar Bevel Siding, 5/8"	1.25
Cedar Rustic Siding, 3/8"	1.20
Fir Rough Siding	1.15
Redwood Sawn Plain, 3/8"	1.45
Redwood Shiplap Siding, 5/8"	1.60
Wood Shingle Siding-Fire Rated	2.50
Asbestos Protected Metal	2.65
Asbestos Shingles	1.25
Asphalt Shingles	0.90
Corr. Iron Siding (26 Ga.) Plain	1.40
Corr. Iron Siding (26 Ga.) Colored	1.65
Corr. Asbestos Siding	2.40
Corr. Aluminum .024" Thick (Unpainted)	1.60
Corr. Aluminum .024" Thick (Painted)	1.85
Corr. Aluminum .032" Thick (Unpainted)	1.85
Corr. Aluminum .032" Thick (Painted)	2.10
Corr. Fiber Glass Panels-Fire Rated	3.00
Stucco on Frame	1.60
Stucco on Masonry	1.90
Wood Vertical Sheet Siding	1.40

GLASS BLOCK PER S/F SURFACE

8" x 8" x 4" Thick Plain Face	9.65
12" x 12" x 4" Thick Plain Face	11.25
8" x 8" x 4" Colored Glass	10.65
12" x 12" x 4" Colored Glass	9.65

MASONRY PER S/F SURFACE

4" Face Brick - Veneer - Normal	5.40
4" Face Brick - Veneer - 1st Grade	5.70
4" Common Brick - Veneer	4.80
8" Common Brick Wall	9.50
12" Common Brick Wall	11.15
16" Common Brick Wall	14.45
4" Concrete Block Wall	2.65
6" Concrete Block Wall	2.90
8" Concrete Block Wall	3.65
12" Concrete Block Wall	4.95
4" Concrete Block Backup	2.65
6" Concrete Block Backup	2.90
8" Concrete Block Backup	3.65
4" Face Brick & 4" Common Brick	10.15
4" Face Brick & 8" Common Brick	14.85
4" Face Brick & 4" Concrete Block	7.95
4" Face Brick & 6" Concrete Block	8.25
4" Face Brick & 8" Concrete Block	9.00
4" Face Brick & 4" Tile	12.95
4" Face Brick & 8" Tile	16.10
4" Local Stone Veneer	9.00
Limestone Facing	11.40
1" Artificial Stone Wainscot	17.45
1" Slate	16.10
2" Slate	20.00
2" Glazed Tile - 1 Side - Interior	6.60
4" Glazed Tile - 1 Side - Interior	7.45
8" Glazed Tile - 1 Side - Interior	10.75
5 Coats-Plaster on Int. Masonry Wall	0.30
1½" Marble - Domestic	19.65
1" Marble - Foreign	24.55

PRECAST TILT-UP CONCRETE PANELS

PRECAST TEES
PER S/F

PLANKS	S/F	WALL	S/F	SINGLE		DOUBLE	
6" Hollow Core	3.95	Flat Panel	11.25	10' x 24" Deep	5.45	6' x 12" Deep	4.80
8" Hollow Core	4.15	Shaped Panel	15.35	10' x 36" Deep	6.70	6' x 18" Deep	5.35
12" Hollow Core	4.95	Window Panel	18.65	10' x 48" Deep	7.60	6' x 24" Deep	5.85
				6' x 12" Deep	6.45		
				6' x 24" Deep	7.75		
BEAMS	LN.FT.	COLUMNS	LN.FT.				
12" x 12"	38.80	12" x 12"	28.25				
12" x 18"	47.50	18" x 18"	46.25				
12" x 24"	62.70	24" x 24"	58.30				

46.6.6. FLOOR CONSTRUCTION

CONCRETE GROUND SLABS
PER S/F

PRESTRESSED CONCRETE JOIST
PER L/F

4" Concrete Including Base	1.55	6" x 12"	8" x 12"	10" x 12"	12" x 12"
4" Concrete-Mesh Rein.-Incl. Base	1.95	5.20	5.55	6.60	7.95
6" Concrete-Mesh Rein.-Incl. Base	2.55				
8" Concrete-Mesh Rein.-Incl. Base	4.40				
10" Concrete-Mesh Rein.-Incl. Base	5.55				

HOLLOW CORE SLABS (FLEXICORE)
PER S/F

CONCRETE STRUCTURAL SLABS
PER S/F

4"	6"	8"	10"
3.80	4.15	4.60	5.35

FLOOR
THICKNESS

FLAT
SLAB

5"	6.85
6"	7.35
7"	7.80
8"	8.35
9"	8.85
10"	9.55

LONG SPAN STEEL DECKING
PER S/F

Cellular decking with cells used for
Ventilation or Electrical Distribution

1 1/2" Depth	4.15
3" Depth	4.55
4 1/2" Depth	5.55
6" Depth	5.95
7 1/2" Depth	6.45

FLOOR TOPPING
THICKNESS

CONC. TOPPING
ON 3" RIB MET. DECK

2 1/2"	5.70
3"	5.85
3 1/2"	5.95
4	6.05

WOOD AND TIMBER CONSTRUCTION
PER S/F

1" Wood Subfloor-Horizontal	0.95
1" Wood Subfloor-Diagonal	1.00
1/2" Plywood	0.70
5/8" Plywood	0.80
5/8" Particle Board	0.70
5/8" Wood Fiber Board	0.75

For Beam & Girder job Deduct 5% from Flat
Slab.

Wood and Timber Construction Cont'd Next Page

PART 4: REPLACEMENT COST

WOOD AND TIMBER CONST. (Cont'd)

	Per Bd. Ft.
2" x 8" Wood Joist	0.90
2" x 10" Wood Joist	0.94
2" x 12" Wood Joist	0.95
4" x 12" Timber Framing	1.33
Treated Timber Framing	1.46

	Per Bd. Ft.
2" x 4" Wood Sleepers on Concrete, Treated	1.55
2" x 6" Wood Sleepers on Concrete, Treated	1.25

FINISHED FLOORS PER S/F

1 1/2" Cement Topping	1.25
Each Additional 1/2" ADD	0.90
Monolithic Finish	2.35
Fir Flooring 1" x 4" T&G	2.10
Oak Flooring 2 1/4" T&G	2.60
Sanding and Finish-ADD	0.95
2" Wood Block Flooring-Creosoted	2.40
2 1/2" Wood Block Flooring-Creosoted	3.00
3" Wood Block Flooring-Creosoted	3.50

FINISHED FLOORS (Cont'd)

3/16" Asphalt Tile-Dark Marbleized	0.95
3/16" Asphalt Tile-Med. Lt. Marbleized	1.10
3/16" Asphalt Tile-Light Col. Marbleized	1.15
1/8" Greaseproof Asphalt Tile	0.95
1/8" Vinyl Asbestos Tile	1.25
1/8" Solid Vinyl Tile-Travertine	2.15
1/8" Rubber Tile	1.85
3/32" Linoleum-Light	1.30
1/8" Linoleum-Heavy	1.65
Neoprene Tile Floor	5.20
Ceramic Tile Floor-On Mortar	3.65
Ceramic Tile Walls on Mastic	3.50
Ceramic Tile Walls on Mortar	4.30
2 3/4" Quarry Tile-Epoxy Grout	5.85
2 3/4" Quarry Tile-Acid Resistant	7.10
1" Slate Flooring	16.10
2" Terrazzo Bonded on Concrete	4.80
3" Terrazzo Not Bonded to Concrete	6.05
1 1/2" Marble-Domestic	19.65
1" Marble-Foreign	24.55
2" Slate-Flooring	20.00

46.6.7. ROOF CONSTRUCTION

ROOFING PER S/F

Roll Roofing-55# Smooth Surface	0.35	Slate Shingles	3.65
Roll Roofing-90# Mineral Surface	0.50	Spanish Tiles-Wired	3.45
Compo, Roofing 3 Ply	0.75	Wood Shingles #1 Cedar	1.60
Compo, Roofing 4 Ply	0.95	Wood Shingles-Fire Treated	2.25
Compo, Roofing 4 Ply & Gravel	1.10	Porcelain Enamel Tiles-18 Ga.	4.10
Compo, Roofing 5 Ply & Gravel	1.20	Corr. Aluminum .024" Thick-Unpainted	1.45
Fiberglass Shingles 220#	0.50	Corr. Aluminum .024" Thick-Painted	1.70
Fiberglass Shingles 240#	0.60	Corr. Aluminum .032" Thick-Unpainted	1.85
Fiberglass Shingles 260#	0.65	Corr. Aluminum .032" Thick-Painted	2.10
Asphalt Shingles 235#	0.90	Corr. Iron 24 ga.-1" insulated-Unpainted	2.35
Asphalt Shingles 300#	0.95	Corr. Iron 24 ga.-1" insulated-Painted	2.65
Asphalt Shingles 350#	1.20	Corr. Asbestos	2.40
Concrete Tile-Standard	1.65	Corr. Fiberglass panels-Fire Rated	3.00

46. UNIT-IN-PLACE COSTS

WOOD DECKING PER S/F

1" Wood Fiber Decking	1.00
Marine-Plywood Decking, 1/2"	2.55
Marine-Plywood Decking, 5/8"	2.65
Marine-Plywood Decking, 3/4"	2.80
2" Laminated Wood Decking	1.75
3" Laminated Wood Decking	2.90
4" Laminated Wood Decking	3.80

WOOD RAFTERS & PURLINS PER BD. FT.

2" x 6" to 2" x 12" Flat Roof	1.00
2" x 6" to 2" x 12" Gable Roof	1.25
2" x 6" to 2" x 12" Steep or Cut-Up Roof	1.55

INSULATION-RIGID TYPE PER S/F

1" Wood Fiber Board	0.45
2" Wood Fiber Board	0.80
Polyurethane Core-1" Thick	0.75
Polyurethane Core-2" Thick	1.15
Polyurethane Core-3" Thick	1.55

STEEL DECKING PER S/F

	Inter. Rib	Wide Rib	Composite 2" Lok-Floor
18 Ga. Painted	1.30	1.65	1.45
18 Ga. Galv	1.45	1.75	1.60
20 Ga. Painted	1.15	1.40	1.25
20 Ga. Galv	1.25	1.55	1.40
22 Ga. Painted	1.00	1.25	1.10
22 Ga. Galv	1.15	1.40	1.20

POURED GYPSUM DECKING PER S/F

Cement Fiber Plank, T & G 2" Thick	1.55
Cement Fiber Plank, T & G 2 1/2" Thick	1.70
Cement Fiber Plank, T & G 3" Thick	1.85
Sub-Purlins 6' Span	0.45
Sub-Purlins 8' Span	0.60

ADD for Form Boards Below:

Acoustical 1" Thick	1.20
Acoustical 2" Thick	1.85
Asbestos Cement Board 1/4" Thick	0.80
Gypsum Board 1/2" Thick	0.70
Mineral Fiber 1" Thick	0.75
Mineral Fiber 2" Thick	1.00
Wood Fiber 1" Thick	0.80

ADD to Form Boards Above:

Poured Gypsum 2" Thick	0.65
Poured Gypsum 2 1/2" Thick	0.75
Poured Gypsum 3" Thick	0.90

PRECAST CONCRETE SLAB PER S/F

2"	2 1/2"	3"
7.75	8.05	8.35
Pre-cast, Pre-stressed Concrete Channel.		

LONG SPAN STEEL DECKING PER S/F

Web Depth	20 Ga.	18 Ga.	16 Ga.
4 1/2" Depth	4.60	4.95	5.20
6" Depth	4.80	5.10	5.45
7 1/2" Depth	5.45	5.85	6.20

PART 4: REPLACEMENT COST

46.6.8. INTERIOR FINISH

WOOD FURRING

1" x 2" on Masonry Wall	Per Ln. Ft.	0.50
1" x 2" on Concrete Wall	Per Ln. Ft.	0.75
1" x 2" on Wood Wall	Per Ln. Ft.	0.45
5 Coats Plaster on Masonry Walls-Per S/F		0.30

WALL BOARDS PER S/F

1/4" Sheetrock-Taped & Tex.	0.35
1/2" Sheetrock-Taped & Tex.	0.60
5/8" Sheetrock-Taped & Tex. Fire-rated	0.70
5/8" Sheetrock-Moisture Resistant	0.75

1/4" Tempered Hardboard	0.60
3/8" Tempered Hardboard	0.65

Formica	7.80
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PREFINISHED PANELING PER S/F

Birch	1.30
Cherry	1.55
Oak	1.65
Walnut	1.95

STRUCTURAL GLAZED TILE PER S/F

2" Wall-Single Face	6.60
4" Wall-Single Face	7.45
6" Wall-Single Face	8.55
4" Wall-Double Face	9.50
ADD For Finish on Unglazed Side	0.20

LATH & PLASTER PER S/F

3/8" Gypsum Lath & Plaster Wall	3.65
1/2" Gypsum Lath & Plaster Wall	3.80
Metal Lath & Plaster Wall	2.25
Metal Lath & Acoustical Plaster	4.30
For Ceiling Work ADD to above 0.10%	

PARTITIONS PER S/F

2" x 4" Stud Partitions, Finished 2 Sides,
Including Normal Openings

1/2" Sheetrock (Dry Wall)-Fire Rated	3.80
Gypsum Lath & Plaster	4.95
Metal Lath & Plaster	5.70

Metal Partitions	9.25
------------------	------

Masonry Partitions-Use Masonry
Wall Price and ADD for Finish 2 sides

CEILING INSULATION - NON-RIGID TYPES PER S/F

Fiberglass-Blankets or Batts-12" Thick	0.90
Fiberglass-With Foil one side-10" Thick	0.70
Fiberglass-With Foil one side-6" Thick	0.50

Ultra Therm-Acoustical-6" Thick	0.50
Perlite-2" Thick	0.60
Vermiculite-Poured-2" Thick	0.75
Vermiculite-Poured-3" Thick	0.95

ACOUSTICAL CEILINGS PER S/F

Fiberglass-Suspended	2.05
Mineral Fiber-Glued	2.55
Mineral Fiber-Suspended	2.90
Steel Metal Pan-Suspended	3.45
Alum. Metal Pan-Suspended	3.95
Stainless Steel Pan-Suspended	4.95
Luminous Ceiling-Panels	2.80

46. UNIT-IN-PLACE COSTS

PAINTING PER S/F

Interior Plaster 2 Coat Brush	0.43	Stucco Exterior 2 Coat Spray	0.34
Interior Plaster 2 Coat Roller	0.39	Masonry Walls 2 Coat Brush	0.86
Exterior Wood 2 Coat Brush	0.41	Masonry Walls 2 Coat Roller	0.89
Exterior Wood 2 Coat Roller	0.42	Masonry Walls 2 Coat Spray	0.79
Stucco Exterior 2 Coat Roller	0.35	Hand Sanding, Puttying, Prep	0.14

46.6.9. DOORS

OVERHEAD WOOD OR METAL DOORS S/F OF SURF. AREA

Size	Wood Per S/F	Metal Per S/F
To 100 S/F	7.60	7.90
To 200 S/F	6.35	7.60
Over 200 S/F	5.70	6.95

Mechanical Operation: ADD \$360
Electric Operation: ADD \$905

WOOD COLD STORAGE DOORS EACH

Size	Chiller/ Cooler	Freezer	Sharp Freeze
2'-0" x 3'-0"	350.00	380.00	420.00
2'-6" x 6'-6"	880.00	960.00	1,080.00
3'-0" x 6'-6"	1,040.00	1,150.00	1,290.00
4'-0" x 6'-6"	1,270.00	1,420.00	1,590.00
5'-0" x 6'-6"	1,590.00	1,770.00	2,000.00
6'-0" x 6'-6"	1,900.00	2,130.00	2,410.00
8'-0" x 6'-6"	2,180.00	2,510.00	2,880.00

Cooler & Freezer Doors are usually inset doors.
Sharp Freeze Doors are usually overlap doors.
For Metal Doors ADD 23% to above cost.
For Stainless Steel Doors double above cost.

46.6.10. COLD STORAGE INSULATION PER S/F OF SURFACE AREA (WALLS, FLOORS, CEILINGS)

Type	Insulation Thickness				
	1"	2"	4"	6"	8"
Cork Board	1.70	2.90	5.00	6.85	8.60
Styrofoam	1.60	2.40	3.75	4.70	5.55
Fiberglass	1.45	2.15	3.30	4.05	4.80
Foamglass	1.65	2.80	4.80	6.60	8.20
Mineral Wool	1.00	1.65	2.80	3.65	4.55
Polyurethane:					
-Spray	1.70	2.90	5.10	7.00	----
-Board	1.60	2.65	4.55	6.15	----

Cost is for Installation, Vapor Barrier, Hot Asphalt, Skewers, Furring, Sealing.

PART 4: REPLACEMENT COST

46.6.11. WINDOWS PER S/F

Wood Sash Windows	7.70
D.H. Wood Sash	11.50
Aluminum Frame Windows	10.15
Steel Sash Windows	5.35
Continuous Steel Sash	4.70

46.6.12. STAIRS PER FLIGHT

Average Fir or Y.P. Stairs	850.00
Average Hardwood Stairs	1,110.00
Pan Type Steel Stairs-Conc. Treads	2,090.00
Reinforced Concrete Stairs	2,220.00
Fire Escape-First Flight	1,260.00
Fire Escape-Each Additional Flight	1,110.00

46.6.13. ROOF VENTILATION

GRAVITY ROOF / WALL VENTILATORS / EXHAUSTERS

Size In CFM	Ventilators Each, Installed Motorized	Exhausters Each, Installed Motorized
145	190.00	0.00
250	230.00	0.00
325	310.00	610.00
630	410.00	720.00
875	520.00	830.00
1200	730.00	1,020.00
2500	1,590.00	1,390.00
3000	1,780.00	1,490.00
5000	2,020.00	1,590.00
6800	2,150.00	1,780.00

46.6.14. BOILERS

HORIZONTAL RETURN FIRE TUBE BOILERS
LOW PRESSURE (15 LB.) FIREBOX TYPEInstalled Complete, including Pumps, Piping,
Controls & Foundation.

Rated H.P.	Cost Per H.P.	Cost Installed
20 HP	580.00	11,600.00
30 HP	500.00	15,000.00
50 HP	390.00	19,500.00
75 HP	330.00	24,750.00
100 HP	290.00	29,000.00
150 HP	240.00	36,000.00
200 HP	220.00	44,000.00
300 HP	190.00	57,000.00
400 HP	160.00	64,000.00

ADD for Fuel Oil Tanks & Stack

SCOTCH MARINE BOILERS
HIGH PRESSURE (125 LB)Installed Complete, including Pumps, Piping,
Controls & Foundation.

Rated H.P.	Cost Per H.P.	Cost Installed
20 HP	730.00	14,600.00
30 HP	610.00	18,300.00
50 HP	480.00	24,000.00
75 HP	410.00	30,750.00
100 HP	350.00	35,000.00
150 HP	310.00	46,500.00
200 HP	260.00	52,000.00
300 HP	230.00	69,000.00
400 HP	200.00	80,000.00

ADD for Fuel Oil Tanks & Stack

HORIZONTAL RETURN FIRE TUBE BOILERS
HIGH PRESSURE (125 LB.) FIREBOX TYPEInstalled Complete, including Pumps, Piping,
Controls & Foundation.

Rated H.P.	Cost Per H.P.	Cost Installed
20 HP	760.00	15,200.00
30 HP	640.00	19,200.00
50 HP	420.00	21,000.00
75 HP	350.00	26,250.00
100 HP	320.00	32,000.00
150 HP	260.00	39,000.00
200 HP	230.00	46,000.00
300 HP	190.00	57,000.00
400 HP	180.00	72,000.00

ADD for Fuel Oil Tanks & Stack

FUEL OIL TANKS

Underground Fuel Oil Storage Tanks, Including
Excavation, Backfill & Normal Piping.

Capacity, Gallons	Cost Installed
550	1,150.00
675	1,210.00
840	1,290.00
1,000	1,400.00
1,550	1,850.00
2,000	2,330.00
3,000	3,130.00
4,000	3,860.00
6,000	5,220.00
8,000	6,140.00
10,000	7,510.00
15,000	10,900.00
20,000	14,300.00

Increase Cost 35% For Fiber Steel Tanks.

PART 4: REPLACEMENT COST

46.6.15. STEAM GENERATORS

Automatic Steam Generators, Oil or Gas Fired. Installed Complete

PRICE PER HORSEPOWER

H.P. Rating	Lb. of Steam Per Hour	15 Lb. Steam Pressure	125 Lb. Steam Pressure
15	518	630.00	730.00
30	1,035	370.00	430.00
60	2,070	280.00	330.00
100	3,450	250.00	280.00
150	5,175	220.00	270.00
200	6,900	190.00	230.00

46.6.16. WATER STORAGE TANKS

ELEVATED STEEL TANKS

Capacity Of Tank	50' High	If Tower Is:		
		75' High	100' High	150' High
25,000 Gal.	122,300.00	137,500.00	155,600.00	197,900.00
50,000 Gal.	136,800.00	153,400.00	172,200.00	216,700.00
75,000 Gal.	150,700.00	168,000.00	187,500.00	233,400.00
100,000 Gal.	163,800.00	183,400.00	204,100.00	262,300.00
150,000 Gal.	201,400.00	220,800.00	241,600.00	290,200.00
200,000 Gal.	227,800.00	248,600.00	272,100.00	325,000.00
300,000 Gal.	294,500.00	324,300.00	356,900.00	432,600.00
400,000 Gal.	358,300.00	384,600.00	416,600.00	493,000.00
500,000 Gal.	430,500.00	461,100.00	493,000.00	564,500.00
750,000 Gal.	576,400.00	611,100.00	650,000.00	732,000.00
1,000,000 Gal.	750,000.00	798,600.00	849,900.00	965,500.00

For Hurricane or Earthquake Areas

ADD 18% to cost with 50' tower

ADD 19% to cost with 75' tower

ADD 20% to cost with 100' tower

ADD 22% to cost with 125' tower

Prices include Steel Tank, Foundation, Riser Pipe, Frost Case, Ladder and Walkway, Tower, completely installed.

3" REDWOOD TANKS

Capacity Of Tank	Mounted On Bldg. Roof	Add Per L/F Of Tower On Roof
20,000 Gal.	19,700.00	410.00
30,000 Gal.	25,700.00	450.00
40,000 Gal.	31,100.00	510.00
50,000 Gal.	36,200.00	630.00

Use same price for 3" Fir Tanks.

If Redwood Tank is on Steel Tower in yard, use 60% of Steel Tank price.

46.6.17. STACKS
COST PER FOOT OF HEIGHT

Base Dia. Outside	Brick Stack	Concrete Stack	10 Ga. Steel Stack	Base Dia. Outside	Brick Stack	Concrete Stack	10 Ga. Steel Stack
2'	-----	-----	130.00	12'	890.00	780.00	-----
3'	-----	-----	170.00	14'	1,030.00	890.00	-----
4'	-----	-----	200.00	16'	1,150.00	1,010.00	-----
5'	-----	-----	230.00	18'	1,270.00	1,120.00	-----
6'	490.00	420.00	270.00	20'	1,390.00	1,240.00	-----
7'	560.00	480.00	-----	22'	1,510.00	1,350.00	-----
8'	630.00	540.00	-----	24'	1,630.00	1,460.00	-----
9'	690.00	600.00	-----	28'	1,860.00	1,670.00	-----
10'	760.00	660.00	-----	32'	2,090.00	1,880.00	-----

Above costs include normal Foundation, Ladder, Lightning Rods, and Painting. For Square/Rectangular Chimneys, use 1/3 the perimeter in place of the diameter.

46.6.18. RAILROAD SIDING

Cost Per L/F including Rails, Ties, and Ballast. Add \$1,900 for each Siding Bumper. Add \$66.85 per L/F for 9' Concrete Railroad Bed.

Size of Rail (B x H)	Weight of Rail (Lb. per Yd.)	Cost Installed	Add for Switch And Turnout
3 1/2 x 3 1/2	40	37.00	9,200.00
4 1/4 x 4 1/4	60	46.50	11,300.00
5 x 5	80	54.50	12,900.00
5 3/8 x 6	100	61.50	14,500.00
5 1/2 x 6 5/8	115	66.50	15,500.00
6 x 6 3/4	130	71.00	16,400.00

46.6.19. RAILROAD TRACK SCALES

Capacity	Cost
125 Ton	72,500.00

Prices Include Concrete Pit, scale and installation.

46.6.21. TRUCK SCALES

Capacity (Tons)	MECHANICAL / ELECTRICAL Cost
10	11,500.00
15	14,600.00
50	34,800.00
60	36,400.00
80	37,500.00
100	41,200.00
125	46,300.00

ADD 19,600.00 for Computer Outlet.

ADD 2,600.00 for Remote Read System.

ADD 10,400.00 for Weight Printer (Printomatic).

Prices include Platform Pit, scale and installation.

46.6.20. PAVING

Blacktop on 4" Base	Reinf. Concrete	Crushed Stone
2" Topping 0.70	4" 1.60	4" 0.30
3" Topping 0.95	6" 1.75	6" 0.35
4" Topping 1.00	8" 1.90	8" 0.45

± .15 per inch of base.

PART 4: REPLACEMENT COST

46.6.22. WOVEN WIRE FENCE

Based on 10' Sections with 3 strands of barbed wire/1 side, Galv. (L/F includes space for Gates).

	HEIGHT		
	6'	8'	10'
#6 Wire per L/F	9.20	12.55	17.10
#9 Wire per L/F	8.05	10.95	14.90
ADD for Gates 6.95 per S/F of Gates			
DEDUCT for no barbed wire 1.30 per L/F			
ADD for Top Rail 1.10 per L/F			
DEDUCT for large quantity - 10%			
ADD for small quantity - 10%			

46.6.23. UTILITY PIPING PRICE PER L/F

CORRUGATED STEEL

8"	8.35
10"	9.75
12"	11.25
16"	15.35
20"	19.35
24"	24.35
36"	40.80
48"	60.70
60"	82.35

REINFORCED CONCRETE PIPE

8"	7.90
12"	10.75
16"	14.55
24"	23.10
30"	31.30
36"	39.60
48"	59.80
60"	82.85
72"	109.85
84"	137.75
96"	169.80

VALVES

4"	430.00
6"	750.00
8"	1,150.00
10"	1,590.00
12"	2,180.00

BLACK PIPE

4"	9.15
6"	15.95
8"	24.35
10"	33.20

VITRIFIED CLAY PIPE

4"	6.60
6"	7.35
8"	8.50
10"	10.65
12"	12.95
18"	26.25
24"	33.30
30"	48.00

P.V.C. WATER 200#

4"	4.95
6"	7.35
8"	10.50

HYDRANTS

2-Way	790.00
3-Way	920.00

47. DEPRECIATION

TABLE OF CONTENTS

PARAGRAPH NO.	PARAGRAPH TITLE	PAGE	PARAGRAPH NO.	PARAGRAPH TITLE	PAGE
47.1.	COST LEVELS	1	47.4.3.1.	OBY PERCENT GOOD GUIDELINES	8
47.2.	ECONOMIC CONDITION FACTOR	2	47.4.3.2.	OBY PERCENT GOOD CALCULATION	8
47.3.	DEVELOPING DEPRECIATION SCHEDULES	2	47.4.3.3.	ECONOMIC LIFE TABLE	9
47.3.1.	SALES RATIO ANALYSIS	2	47.4.3.4.	OBY PERCENT GOOD TABLES	12
47.3.2.	MARKET DEPRECIATION	3	47.4.4.	COMMERCIAL / INDUSTRIAL	15
47.4.	DEPRECIATION PROCEDURES	4	47.4.4.1.	COMMON CAUSES OF OBSOLESCENCE	15
47.4.1.	DWELLING	4	47.4.4.2.	ECONOMIC LIFE TABLES	16
47.4.1.1.	CDU RATING SYSTEM	4	47.4.4.3.	PHYSICAL CONDITION / FUNCTIONAL UTILITY RATING	19
47.4.1.2.	AGE AND CDU	5	47.4.4.4.	MAIN BUILDING PERCENT GOOD CALCULATION	21
47.4.1.3.	SELECTION OF A PERCENT GOOD	6	47.4.4.5.	COMMERCIAL OBY PERCENT GOOD CALCULATION	21
47.4.1.4.	EXAMPLES USING CDU	6	47.4.4.6.	COMMERCIAL PERCENT GOOD TABLES	21
47.4.2.	MOBILE HOMES	7			
47.4.3.	RESIDENTIAL / AGRICULTURAL OTHER BUILDINGS & YARD IMPROVEMENTS	8			

The *Montana Appraisal Manual* provides benchmark depreciation tables which you may use as a guide in establishing your own depreciation tables. A guide is useful in helping to establish consistency in the rating of properties as to physical condition, functional utility, desirability, etc. as it relates to the property's estimated value. It provides a means to use sales information to establish benchmark ratings for properties in a neighborhood.

The desirability of property can change over time. Sometimes this happens on a global basis,

i.e. the value levels of all property move up or down on a fairly consistent basis; or it can occur with respect to certain groups of property. When this happens, adjustments may be needed in the depreciation schedules or formulas. (We will explain more about how the schedules are generated from the underlying formulas later in this section.)

There are, however, several issues that need to be addressed in conjunction with using or setting the depreciation tables.

47.1. COST LEVELS

The *Montana Appraisal Manual* has been produced with one set of cost tables. It is recognized that these cost figures represent average value levels in the state as of 1987. These figures will need to be adjusted to reflect local construction costs for locales throughout the state. This is done through the application of the county index. The county index can vary substantially across the state due to a number of reasons including: economic climate, availability of skilled labor pool, prevalent use of union or non-union labor, cost of shipping construction materials, etc.

Cost levels may be established through analysis of local new construction costs in your county or region. This can include both a comparison of manual values against actual new construction figures, or where insufficient figures are available, a comparison of labor and materials costs for your area with areas in which this data and a well-established index are available.

The cost index should be established before you start to make adjustments to depreciation tables.

47.2. ECONOMIC CONDITION FACTOR

The economic condition factor is a component of depreciation or market adjustment that is usually applied after normal depreciation. It is normally 1.00 (100%) for the majority of properties where the cost index has been properly established and the depreciation schedules have been adequately calibrated.

It has a role in representing the effects of the economic climate on unique properties in a boom or bust economy. It can affect individual properties, or it can affect a whole class of properties. In a boom economy, market demand can force market prices above actual construction costs, with both new houses and used houses selling well in excess of stabilized construction costs.

In a bust economy that affects certain industries, the market demand for a commercial or industrial facility can turn sour and values can fall substantially, especially if it is a prolonged fall in prices or demands for the services/products the business provides. If that industry is the major source of income for the residents of the area, many people will be forced to seek employment elsewhere causing a glut of properties to go up for sale or in some instances foreclosures. It is not uncommon for values to drop 30-50% in some instances over a several year period of time. There is little or no new construction when this happens. The economic condition factor applied on a regional basis becomes one means of dealing with this situation without changing the normal depreciation which has been applied against the properties, or temporarily lowering the cost index below realistic construction cost minimums.

47.3. DEVELOPING DEPRECIATION SCHEDULES

The *Montana Appraisal Manual* contains a benchmark depreciation table which you may use as a guide in establishing your own depreciation tables. When you begin the process of establishing your depreciation tables, you should have already established your baseline cost index and the grade level and design features for your basic dwelling structure, to arrive at a proper RCN (Replacement Cost New).

Depreciation reflects a composite of physical depreciation due to age and condition, as well as functional and economic obsolescence which can be related to age, location, and economic conditions. For Residential property, these are reflected in CDU (condition - desirability - utility) rating.

If you use a standard benchmark CDU table as a guideline in establishing your local benchmark CDU's early in the appraisal process, and then use the local benchmark CDU's on a consistent basis (uniform within a neighborhood), you can apply the Cost Approach reasonably with only minor adjustments to the depreciation tables to reflect changes in market condition that occur during the reappraisal project.

Several analysis capabilities are available in the Montana MAS to assist in the process of adjusting the CDU tables and the depreciation tables. These include Sales Ratio Analysis and Market Modeling for Depreciation. They will be discussed briefly later in this Section, and in depth in the Valuation Manual.

Adjustment of the CDU table cannot correct problems due to underlying inconsistency in CDU's on individual properties.

47.3.1. SALES RATIO ANALYSIS

The Sales Ratio report provides summary statistics on the ratio of appraised values to sales prices. Sales may be aggregated by price range or age within the residential improved class. Statistics include the number of sales, aggregate ratio, mean ratio, standard deviation, median ratio, and coefficient of dispersion (COD).

The Sales Ratio report provides information to assist in establishing a county index. By taking recent sales and considering the sales ratios for new homes (0-3 years old), a county index may be

computed which, if applied, will bring the ratio on new homes to 100%.

The county index factor derived in this way should be tested against other indicators. In particular, RCNLD's for new houses should be compared against available new construction costs. Ratios should be tabulated and summary statistics should be calculated for comparison against other indicators.

Sample Residential Sales Ratio Report

Age Range Impr. (Yrs)	No. Sales	Aggr. Ratio	Mean	Std. Dev.	Median Ratio	COD
0-3	40	106.3	107.1	10.9	106.9	8.2
4-6	15		109.2			
7-10	20		109.2			
11-15	25		108.3			
16-20	20		110.4			
21-30	30		112.7			
31-40	20		113.2			
41-50	15		109.2			
51-60	10		104.			
61+	25		101.0			
Total						
Impr.	220	109.2	108.5	12.9	108.6	9.8
Vacant	30					
Total Resid.	250					

NOTES: Using median as the overall ratio and assuming that land represents 20% of the total value, the appropriate index would be calculated as:

$$\frac{B}{R - L}$$

where R is the overall ratio and B and L are the portions of total appraised value associated with Land and Building. In this case:

$$\frac{B}{R - L} = \frac{.8}{1.069 - .2} = .92$$

Using the total residential improved statistics and a somewhat higher land percentage of 22%, we have:

$$\frac{B}{R - L} = \frac{.78}{1.086 - .22} = .90$$

The Sales Ratio Analysis report can also be used for validating depreciation tables. For example, in the above case after applying a county index of .90 to improvement values, the ratios would still indicate the need for some downward adjustment to the percent goods in the middle age ranges of the depreciation table and an increase in percent goods in the bottom age ranges of the table.

Age Range	Existing Table	Adjusted
0-3	97%	98%
4-6	93%	94%
7-10	90%	90%
11-15	85%	85%
16-20	80%	78%
21-30	75%	72%
31-40	70%	67%
41-50	65%	64%
51-60	60%	62%
61+	55%	60%

The above adjustments reflect some smoothing to new factors derived from the sales ratio data to ensure that values will not jump erratically with a small change in age.

The above analysis assumes that all dwellings had been recorded as having CDU of average.

47.3.2. MARKET DEPRECIATION

Another alternative to developing market-based depreciation is the use of the Market Modeling subsystem in Montana MAS to develop depreciation models. Templates have been set up under OLPM for use with the Alternate Market Valuation menu to extract sales information, to develop a market-derived percent good for the dwelling residual, and to model this "percent good" as a function of age and CDU rating.

47.4. DEPRECIATION PROCEDURES

It is often advisable to develop schedules and tables to be used as a guide for the appraiser to determine value. The use of such tables is especially applicable in mass appraisals for tax equalization purposes where it is essential to establish and maintain uniformity. However, Percent Good tables, based on actual age alone are impractical. Remodeling, for instance, has the effect of prolonging the remaining life of a building, thus making its effective age considerably different than its actual age. Consideration must be given to all the factors operating to influence the overall condition, desirability, and degree of usefulness of each structure.

47.4.1. DWELLING

47.4.1.1. CDU Rating System

As houses grow older, they wear out; they become less desirable, less useful. This universal decline in value is called depreciation, and appraisers are required to determine the degree of this loss in each property they examine. If all houses deteriorated at the same rate, this decline in value would be a simple function of the age of the structure - a certain percentage per year. However, houses depreciate at varying rates depending on a number of variables.

Every building is acted upon by two value reducing forces. One tends to shorten its physical life, the other shortens its economic life. Both forces act concurrently, overlap, and affect each other. Its expectancy of life - both physical and economic - is longest on the day the key is handed over by the builder. The building is then most desirable and most useful. The future benefits which the occupant may expect to enjoy are at the maximum. From that day forward, however, decay and wear and tear act to lessen the value of the structure by curtailing its remaining capacity for use.

At the same time the house is "wearing out", it is also "going out of style". It is becoming less desirable. It is progressively becoming less useful, both from the effect of forces within the property (obsolescence), and outside of it as well (encroachment of undesirable influences such as less desirable property uses).

Neither physical decline nor functional loss are constant in their action. Deterioration is a relatively steady process offset periodically by maintenance. Worn-out elements of the building are repaired or replaced at intervals, depending upon the policy of the owner. Cheaper houses generally deteriorate faster than better ones. Obsolescence and encroachment may come slowly, or happen almost overnight. The forces which cause both deterioration and functional/economic depreciation may act and often do act simultaneously, but they are not necessarily related. A house may decline in physical condition, and yet throughout its entire life remain relatively functional.

Obviously, the age of a house remains an important factor in estimating accrued depreciation. Many houses receive "normal" maintenance and experience "average" economic loss due to obsolescence and functional depreciation. These buildings depreciate at an average rate as they grow older.

Other houses lose value at lesser or more rapid rates. CDU Ratings provide a means by which normal depreciation may be modified according to the appraiser's best determination of the relative loss of value in a structure, as compared with the average loss that might be expected. The age of a dwelling by itself is an unreliable indicator of the degree of depreciation from its cost new. For houses also depreciate because they wear out and become less desirable and less useful from a variety of causes.

To assist the appraiser in establishing the CDU rating of a building, a classification or rating scheme that follows the normal observations of an appraiser as a building is examined has been developed. The following table lists the CDU ratings and their accompanying definitions of the observed physical condition of the building and the degree of desirability and usefulness for the building age and type.

CDU RATING GUIDE

CDU Rating Of Dwelling	Definition
UN SOUND	Dwelling is definitely unsound and practically unfit for use.
VERY POOR	Condition approaches unsoundness; extremely undesirable and barely usable.
POOR	Definite deterioration is obvious; definitely undesirable and barely usable.
FAIR	Marked deterioration, but quite usable; rather unattractive and undesirable.
AVERAGE	Normal "wear and tear" is apparent; average attractiveness and desirability.
GOOD	Minor deterioration is visible; slightly more attractive, desirable and useful.
VERY GOOD	Slight evidence of deterioration; attractive and quite desirable.
EXCELLENT	Dwelling is in perfect condition; very attractive and highly desirable.

47.4.1.2. Age and CDU

Age is reflected as an index of the normal deterioration and obsolescence in a structure which may be expected over the years. *Condition* represents a variable measure of the effects of maintenance and remodeling on a building. *Desirability* is a measure of the degree of appeal a particular building may have to prospective purchasers. *Usefulness* is a measure of the utility value of the structure for the purpose for which it may be used.

The degree of deterioration and obsolescence, or loss of value from all causes, both within and without the property, is automatically taken into account. This is accomplished by means of a simple CDU rating of the capabilities and qualities of the structure, in the same manner as would a prospective purchaser. Sound valuation theory presupposes the existence of a prospective buyer with intelligence enough to compare the advantages and disadvantages of competing properties, and to rate the property he is examining according to its relative degree of desirability and usefulness.

Percent good is defined as the resultant estimate of the diminishing value of an improvement, after subtracting the amount of estimated depreciation from the Replacement Cost New. For example, a structure which is estimated to be 45 percent depreciated as of a given time has a percent good of 55. Therefore, depreciation and percent good are complements of each other.

Once the CDU rating of a building has been established through a consideration of its condition, desirability, and usefulness for its age and its type, reference to the Dwelling Percent Good Table will indicate the appropriate value percent remaining for a structure possessing these qualities, in the degree observed and noted by the appraiser.

PART 4: REPLACEMENT COST

47.4.1.3. Selection of a Percent Good

There are only two steps to determine the Percent Good of a dwelling.

- 1 Rate the dwelling in terms of its overall condition, desirability, and usefulness, CDU.

- 2 From the following table, select the corresponding Percent Good based on the dwelling's observed age, either actual age or a calculated effective age, and the established CDU.

PERCENT GOOD TABLE FOR DWELLINGS

OBSERVED AGE	Excellent	Very Good	Good	Average	Fair	Poor	Very Poor	Unsound
0 - 3	100	97	95	90	85	80	75	60
4 - 8	97	95	90	85	80	75	70	55
9 - 13	95	90	85	80	75	70	65	50
14 - 18	90	85	80	75	70	65	60	45
19 - 23	85	80	75	70	65	60	50	35
24 - 28	80	75	70	65	60	50	40	25
29 - 38	75	70	65	60	50	40	35	20
39 - 49	70	65	60	55	45	35	30	20
50 & over	65	60	55	50	40	30	25	20

47.4.1.4. Examples Using CDU

To use the CDU System, the appraiser rates each house according to his composite impression of its relative condition, desirability, and usefulness - for its age and type. The following four cases illustrate this convenient and practical method of determining percent good in houses.

Case One: A fifteen-year-old single family residence situated in an attractive residential suburb of a typical American community. Grade "6" with two baths. Minor deterioration is visible; slightly less attractive and desirable than new, but useful. A qualified observer would rate this house above average on the CDU Rating System. Accordingly, our appraiser has assigned it a CDU Rating of "Good". Referring to the Percent Good Table for Dwellings, we find 80% Good would be appropriate.

Case Two: A one story frame house seven years old. Grade "5" or average quality construction; three bedrooms, one and one-half baths. Structure shows normal wear and tear and has average attractiveness and desirability. The appraiser's impression is, "for a seven-year-old Grade "5" house, this would be rated as Average." From the table we find 85% Good is indicated.

Case Three: This century-old Colonial style frame house is located in a New England seaport community; erected 1858. Grade "6" or good quality construction. Building has been extremely well maintained and completely modernized with central heating, electric lighting, and plumbing added. The structure is in good physical condition in spite of its age. Building is architecturally attractive and quite desirable. The appraiser's impression is, "for a very old house of Grade "6" quality, this is an Excellent one." From the table 65% Good is indicated.

Case Four: A twenty-four-year-old single family residence of Grade "5" quality; one story and basement, frame construction; three bedrooms with bath. Structure has had normal maintenance and is average in physical condition. Within the past two years, an elevated six-lane expressway passing over the adjoining lot has been erected. This encroachment has seriously detracted from the attractiveness and desirability of the property. Accordingly, the appraiser has assigned a CDU Rating of "Very Poor". From the table 40% Good is indicated.

47.4.2. MOBILE HOMES

The depreciation procedures to be followed for mobile homes is the same as for dwellings with one exception, there is a separate Percent Good Table For Mobile Homes.

There are only two steps to determine the Percent Good of a mobile home.

- 1 Rate the mobile home in terms of its overall condition, desirability, and usefulness, CDU.
- 2 From the following table, select the corresponding Percent Good based on the mobile home's observed age, either actual age or a calculated effective age, and the established CDU.

PERCENT GOOD TABLE FOR MOBILE HOMES

OBSERVED AGE	Excellent	Very Good	Good	Average	Fair	Poor	Very Poor	Unsound
0 - 1	99	99	98	98	97	97	97	93
2	96	95	94	92	90	89	88	66
3	94	93	91	89	85	84	82	50
4	92	91	88	85	80	78	76	37
5	90	89	85	82	75	73	70	29
6	88	87	83	79	70	68	64	22
7	87	85	80	76	66	63	58	18
8	85	83	78	73	62	58	53	18
9	84	82	76	70	58	54	49	18
10	82	80	74	68	55	50	44	18
11 - 12	80	78	71	64	50	45	39	18
13 - 14	78	75	67	59	44	39	33	18
15 - 16	76	72	63	55	39	34	28	18
17 - 19	73	69	60	51	34	28	23	18
20 - 23	70	65	55	45	28	23	18	18
24 - 27	66	61	50	39	23	18	18	18
28 - 31	63	58	45	35	19	18	18	18
32 - 35	61	54	42	31	18	18	18	18
36 - 39	59	52	39	28	18	18	18	18
40 & over	57	50	37	26	18	18	18	18

PART 4: REPLACEMENT COST

47.4.3. RESIDENTIAL AND AGRICULTURAL OTHER BUILDINGS & YARD IMPROVEMENTS

47.4.3.1. OBY Percent Good Guidelines

The appraisal of Other Buildings and Yard Improvements for both residential and agricultural properties is a difficult task. Other Buildings and yard Improvements are rarely purchased or sold separately from the balance of the property. The cost of construction of a swimming pool, which is built for the convenience and comfort of a property owner, will rarely add an equivalent amount to the market value of the property. The cost of construction of a farm outbuilding that can be justified by its contribution to the farming operation will again seldom add an equivalent amount to the market value of the property.

In effect, Other Buildings and Yard Improvements have value in direct proportion to their degree of utility or usefulness. This is an extension of the principle of contribution, which affirms that the value of any factor in production is dependent upon the amount which it contributes to the overall net return, irrespective of the cost of its construction. Any effective approach to the valuation of Other Buildings and Yard Improvements must reflect the action of investors. Informed farm owners and operators would not invest in buildings which could not pay for themselves by either maintaining or adding to the required level of productivity. Homeowners would not invest in swimming pools, detached garages, etc., which would not supply the degree of conformity and/or convenience they desire.

The physical condition of an Other Building or Yard Improvement bears a direct relationship on the desirability and usefulness of that improvement. It is, therefore, possible to apply the CDU Rating System explained in Section 47.4.1 to generate a percent good estimate for different types of improvements of varying ages, based on condition, desirability, and usefulness.

The CDU Rating System has been modified to assist the appraiser in developing applicable depreciation guidelines based upon the condition, desirability and usefulness of various Other Buildings and Yard Improvements.

For the appraisal of Other Building and Yard Improvements, the term CDU Rating is modified

to become Condition Rating. The term Condition Rating will still give the same consideration to all factors which influence the overall condition, desirability, and degree of usefulness of each structure. The eight CDU Ratings have been simplified to six Condition Ratings. These ratings are again intended to fit the normal impressions of an appraiser as the improvement is examined. Condition Ratings, with their accompanying definitions are as follows:

OBY CONDITION RATING GUIDE

Condition Rating	Definition
UNSOUND	Improvement is definitely unsound and practically unfit for use.
POOR	Definite deterioration is obvious; definitely undesirable and barely usable.
FAIR	Marked deterioration, but quite usable; rather unattractive and undesirable.
AVERAGE	Normal "wear and tear" is apparent; average attractiveness and desirability.
GOOD	Minor deterioration is visible; slightly more attractive, desirable and useful.
EXCELLENT	Improvement is in perfect "like new" condition; very useful and highly desirable.

47.4.3.2. OBY Percent Good Calculation

The Percent Good (PG) calculation uses the Economic Life of the improvement; the Year Built; the Appraisal Year, the computer system Appraisal Year of valuation; and the Bottom-out Percent Good, in the following calculation.

The Economic Life of the improvement and its Bottom-out Percent Good is found in the Residential/Agricultural OBY Cost Tables for the specific improvement.

$$PG = \frac{DF}{1 + X(1-X) + A X^2}$$

where DF = Desirability Factor for structure

$$\text{where } A = \frac{100 * DF}{\text{Bottom-out Percent Good}} - 1$$

$$\text{where } X = \frac{\text{Appraisal Year} - \text{Year Built}}{\text{Economic Life}}$$

NOTE: If (Appraisal Year - Year Built) is less than the Economic Life use X, otherwise use 1.

For example:

A residential detached frame garage in Good condition was built in 1977. The Percent Good calculation for this OBY improvement is:

From the Residential/Agricultural OBY Cost Table:
Economic Life for a Frame Garage = 50 Years Bottom-out Percent Good for a Frame Garage in Good Condition = .45

Therefore:

$$A = \frac{1.00}{.45} - 1 = 1.22$$

$$X = \frac{1989 - 1977}{50} = \frac{12}{50} = .24$$

$$PG = \frac{1}{1 + .24(1 - .24) + (1.22)(.24)^2}$$

$$PG = \frac{1}{1 + .182 + .07} = \frac{1}{1.25} = .80 \text{ or } 80\%$$

To facilitate manual computations, computer-generated depreciation tables are provided.

This depreciation formula provides for continuous depreciation from a starting Percent Good of (100 * DF) for the structure when it's new to the Bottom-out Percent Good at the end of it's expected life. It starts depreciation at a straight-line rate from it's beginning Percent Good to 0 at the end of it's expected life. This depreciation is gradually adjusted, being decelerated for structures in good condition and of high desirability toward a higher Bottom-out Percent Good.

The desirability factor indicates that the market value for many auxiliary structures do not reflect their cost in the market place, even when new. As an example, detached garages are usually more expensive to build than attached garages, but market demands puts a higher value on an attached garage of the same size.

47.4.3.3. Economic Life Table

The following table details the expected normal economic life of Residential/Agricultural Other Building and Yard Improvements. This information can also be found in the Residential Cost Tables.

The economic life of an improvement is part of the calculation to derive the Percent Good of the improvement.

PART 4: REPLACEMENT COST

NORMAL ECONOMIC LIFE TABLE FOR RESIDENTIAL / AGRICULTURAL OTHER BUILDING AND YARD IMPROVEMENTS

OBJ CODE	DESCRIPTION	ECONOMIC LIFE	OBJ CODE	DESCRIPTION	ECONOMIC LIFE
AB1	Bank Barn	50	AP6	Pole Frame Building, 4-Sides Open, Wood	30
AB2	Standard Barn	50	AQ1	Quonset Building	30
AD1	Horse Barn or Stable	50	AR1	Granary	50
AF1	Concrete Feed Bunk	30	AS1	Silo, Conc Stave, with roof	50
AF2	Post & Plank Bunk	30	AS2	Silo, Conc Stave, w/o roof	50
AF3	Concrete Fence Bunk	30	AS3	Butler LMS Silo	50
AF4	Post & Plank Fence Bunk	30	AS4	Porcelain Silo	50
AG1	Grain bins, w/o drying bin	25	AS5	Prefabricated Steel Silo	50
AG2	Grain bins, with drying bin	25	AS6	Prefabricated Steel Silo, High Moisture	50
AG3	Steel Hopper Bins	25	AT1	Trench, Conc or Plank	25
AH1	1-Story Frame or Metal Poultry House	50	AT2	Trench, Dirt	25
AH2	2-Story Frame or Metal Poultry House	50	AU1	Fuel Tanks, Underground	25
AH3	3-Story Frame or Metal Poultry House	50	AU2	Fuel Tanks, Aboveground	30
AH4	1-Story Concrete Block Poultry House	50	AU3	Horizontal Pressure Tank	30
AH5	2-Story Concrete Block Poultry House	50	AW1	Swine Farrowing Barn	30
AH6	3-Story Concrete Block Poultry House	50	AW2	Swine Finishing Barn	30
AI1	Shed, Wood Frame	25	AW3	Swine Confinement Barn	30
AI2	Shed, Concrete Block	30	AX1	Prefab Building with vertical walls	30
AK1	Bunker Silo	25	AX2	Prefab Building with Slant Walls	30
AL1	1-Story Lean-To	30	AY1	Circular Slurry System	50
AM1	Milk House, Attached, Concrete Block	50	AY2	Rectangular Slurry System	50
AM2	Milk House, Attached, Glazed Tile	50	BB1	Boat House, Frame or Concrete Block	30
AM3	Milk House, Detached, Concrete Block	50	BB2	Boat House, Masonry	30
AM4	Milk House, Detached, Glazed Tile	50	BD1	Boat Dock, Light Wood, Light Posts	15
AM5	Milking Parlor, Concrete Block	50	BD2	Boat Dock, Medium Wood, Wood Girders	15
AM6	Milking Parlor, Glazed Tile	50	BD3	Boat Dock, Heavy Wood, Heavy Pilings	25
A01	Potato Storage, Underground	50	BQ1	Barbecue	25
A02	Potato Storage, Aboveground	50	CA1	Scales, Platform	25
AP1	Pole Frame Building, 4-Sides Closed, Metal	30	CA2	Scales, Truck	25
AP2	Pole Frame Building, 4-Sides Closed, Wood	30	CA3	Scales, Cattle	25
AP3	Pole Frame Building 1-Side Open, Metal	30	GH1	Greenhouse, Wood Frame, Plastic Covered	25
AP4	Pole Frame Building, 1-Side Open, Wood	30	GH2	Greenhouse, Wood Frame, Glass Walls	25
AP5	Pole Frame Building, 4-Sides Open, Metal	30	GH3	Greenhouse, Pipe/Metal Frame, Glass Walls	25
			HT1	Hot Tub	15
			PA1	Paving, Asphalt (Blacktop)	15
			PA2	Paving, Concrete	15
			RC1	Carport	30
			RC2	Canopy	30

NORMAL ECONOMIC LIFE TABLE FOR RESIDENTIAL / AGRICULTURAL
OTHER BUILDING AND YARD IMPROVEMENTS (Cont'd)

OBJ CODE	DESCRIPTION	ECONOMIC LIFE	OBJ CODE	DESCRIPTION	ECONOMIC LIFE
RF1	Fencing, Chain Link	20	RP4	Swimming Pool, Gunite (Sprayed Concrete)	15
RF2	Fencing, Picket	20	RS1	Shed, Frame	30
RF3	Fencing, Stockade	20	RS2	Shed, Metal	30
RF4	Fencing, Post & Rail	20	RS3	Shed, Masonry	30
RF5	Fencing, Basketware	20	RT1	Deck, Wood	20
RF6	Fencing, Brick or Masonry	30	RT2	Deck, Concrete	30
RF7	Fencing, Ornamental Iron	30	RT3	Deck, Stone/Tile with Sand Base	30
RF8	Fencing, Barbed Wire - 4 Strand	20	RT4	Deck, Stone/Tile with Concrete Base	30
RG1	Garage, Detached, Frame, Finished	40	RT5	Deck, Brick	30
RG2	Garage, Detached, Masonry, Finished	40	RT6	Masonry Stoop/Terrace	30
RG3	Garage, Detached, Frame, Unfinished	40	RT7	Patio Covered	20
RG4	Garage, Detached, Masonry, Unfinished	40	RZ1	Gazebo	15
RP1	Swimming Pool, Vinyl-lined	15	TC1	Tennis Court, Asphalt	15
RP2	Swimming Pool, Fiberglass	15	TC2	Tennis Court, Concrete	15
RP3	Swimming Pool, Reinforced Concrete	15	TC3	Tennis Court, Clay	15

PART 4: REPLACEMENT COST

47.4.3.4. OBY Percent Good Tables

Six examples of OBY Percent Good tables have been provided to demonstrate the effect that various years of economic life and bottom out percentages have on the calculated Percent Good.

15 YEAR ECONOMIC LIFE TABLE

BOTTOM OUT %:	OBY IMPROVEMENT CONDITION RATING					
	EXCEL- LENT	GOOD	AVER- AGE	FAIR	POOR	UN- SOUND
	30	25	20	15	10	5
ACTUAL AGE						
1	93	93	93	92	91	87
2	86	86	84	82	78	69
3	80	78	76	72	66	52
4	73	71	68	63	54	39
5	68	64	60	54	45	30
6	62	58	53	47	37	23
7	57	53	47	40	31	19
8	52	48	42	35	26	15
9	48	43	37	30	22	12
10	44	39	33	27	19	10
11	41	36	30	24	17	9
12	38	32	27	21	14	8
13	35	30	24	19	13	6
14	32	27	22	17	11	6
15	30	25	20	15	10	5

25 YEAR ECONOMIC LIFE TABLE

BOTTOM OUT %:	OBY IMPROVEMENT CONDITION RATING					
	EXCEL- LENT	GOOD	AVER- AGE	FAIR	POOR	UN- SOUND
	30	25	20	15	10	5
ACTUAL AGE						
1	96	96	96	95	95	94
2	92	92	91	90	88	84
3	88	87	86	84	81	73
4	84	83	81	78	73	62
5	80	78	76	72	66	52
6	76	74	71	66	59	44
7	72	70	66	61	52	37
8	69	66	61	56	47	32
9	65	62	57	51	42	27
10	62	58	53	47	37	23
11	59	55	49	43	33	20
12	56	52	46	39	30	18
13	53	49	43	36	27	16
14	51	46	40	33	25	14
15	48	43	37	30	22	12
16	46	41	35	28	20	11
17	44	38	33	26	19	10
18	41	36	31	24	17	9
19	40	34	29	22	16	8
20	38	32	27	21	14	8
21	36	31	25	19	13	7
22	34	29	24	18	12	6
23	33	28	22	17	12	6
24	31	26	21	16	11	5
25	30	25	20	15	10	5

47. DEPRECIATION

30 YEAR ECONOMIC LIFE TABLE

BOTTOM OUT %:	OBY IMPROVEMENT CONDITION RATING					
	EXCEL- LENT	GOOD	AVER- AGE	FAIR	POOR	UN- SOUND
	30	25	20	15	10	5
ACTUAL AGE						
1	97	97	96	96	96	95
2	93	93	93	92	91	87
3	90	89	88	87	85	78
4	86	86	84	82	78	69
5	83	82	80	77	72	60
6	80	78	76	72	66	52
7	77	75	72	67	60	45
8	73	71	68	63	54	39
9	70	68	64	58	50	34
10	68	64	60	54	45	30
11	65	61	56	50	41	26
12	62	58	53	47	37	23
13	59	55	50	43	34	21
14	57	53	47	40	31	19
15	55	50	44	38	29	17
16	52	48	42	35	26	15
17	50	45	40	33	24	14
18	48	43	37	30	22	12
19	46	41	35	29	21	11
20	44	39	33	27	19	10
21	42	37	32	25	18	10
22	41	36	30	24	17	9
23	39	34	28	22	15	8
24	38	32	27	21	14	8
25	36	31	26	20	14	7
26	35	30	24	19	13	6
27	34	28	23	18	12	6
28	32	27	22	17	11	6
29	31	26	21	16	11	5
30	30	25	20	15	10	5

50 YEAR ECONOMIC LIFE TABLE

BOTTOM OUT %:	OBY IMPROVEMENT CONDITION RATING					
	EXCEL- LENT	GOOD	AVER- AGE	FAIR	POOR	UN- SOUND
	40	30	25	20	15	5
ACTUAL AGE						
1	98	98	98	98	98	97
2	96	96	96	96	95	94
3	94	94	94	93	93	89
4	92	92	92	91	90	84
5	90	90	89	88	87	78
6	89	88	87	86	84	73
7	87	86	85	83	81	67
8	85	84	83	81	78	62
9	84	82	80	78	75	57
10	82	80	78	76	72	52
11	80	78	76	73	69	48
12	79	76	74	71	66	44
13	77	74	72	68	63	40
14	76	72	70	66	61	37
15	74	70	68	64	58	34
16	73	69	66	61	56	32
17	72	67	64	59	53	29
18	70	65	62	57	51	27
19	69	64	60	55	49	25
20	68	62	58	53	47	23
22	65	59	55	49	43	20
24	63	56	52	46	39	18
26	60	53	49	43	36	16
28	58	51	46	40	33	14
30	56	48	43	37	30	12
32	54	46	41	35	28	11
34	52	44	38	33	26	10
36	51	41	36	31	24	9
38	49	40	34	29	22	8
40	47	38	32	27	21	8
42	46	36	31	25	19	7
44	44	34	29	24	18	6
46	43	33	28	22	17	6
48	41	31	26	21	16	5
50	40	30	25	20	15	5

PART 4: REPLACEMENT COST

50 YEAR ECONOMIC LIFE TABLE

BOTTOM OUT %:	OBY IMPROVEMENT CONDITION RATING					
	EXCEL- LENT	GOOD	AVER- AGE	FAIR	POOR	UN- SOUND
	45	35	30	25	15	5
ACTUAL AGE						
1	98	98	98	98	98	97
2	96	96	96	96	95	94
3	94	94	94	94	93	89
4	92	92	92	92	90	84
5	91	90	90	89	87	78
6	89	88	88	87	84	73
7	87	86	86	85	81	67
8	86	85	84	83	78	62
9	84	83	82	80	75	57
10	83	81	80	78	72	52
11	81	79	78	76	69	48
12	80	78	76	74	66	44
13	78	76	74	72	63	40
14	77	74	72	70	61	37
15	76	73	70	68	58	34
16	74	71	69	66	56	32
17	73	69	67	64	53	29
18	72	68	65	62	51	27
19	71	66	64	60	49	25
20	70	65	62	58	47	23
22	67	62	59	55	43	20
24	65	60	56	52	39	18
26	63	57	53	49	36	16
28	61	55	51	46	33	14
30	60	52	48	43	30	12
32	58	50	46	41	28	11
34	56	48	44	38	26	10
36	54	46	41	36	24	9
38	53	44	40	34	22	8
40	51	43	38	32	21	8
42	50	41	36	31	19	7
44	49	39	34	29	18	6
46	47	38	33	28	17	6
48	46	36	31	26	16	5
50	45	35	30	25	15	5

50 YEAR ECONOMIC LIFE TABLE

BOTTOM OUT %:	OBY IMPROVEMENT CONDITION RATING					
	EXCEL- LENT	GOOD	AVER- AGE	FAIR	POOR	UN- SOUND
	55	45	40	30	20	5
ACTUAL AGE						
1	98	98	98	98	98	97
2	96	96	96	96	96	94
3	94	94	94	94	93	89
4	93	92	92	92	91	84
5	91	91	90	90	88	78
6	89	89	89	88	86	73
7	88	87	87	86	83	67
8	87	86	85	84	81	62
9	85	84	84	82	78	57
10	84	83	82	80	76	52
11	83	81	80	78	73	48
12	81	80	79	76	71	44
13	80	78	77	74	68	40
14	79	77	76	72	66	37
15	78	76	74	70	64	34
16	77	74	73	69	61	32
17	76	73	72	67	59	29
18	75	72	70	65	57	27
19	74	71	69	64	55	25
20	73	70	68	62	53	23
22	71	67	65	59	49	20
24	70	65	63	56	46	18
26	68	63	60	53	43	16
28	67	61	58	51	40	14
30	65	60	56	48	37	12
32	64	58	54	46	35	11
34	63	56	52	44	33	10
36	62	54	51	41	31	9
38	60	53	49	40	29	8
40	59	51	47	38	27	8
42	58	50	46	36	25	7
44	57	49	44	34	24	6
46	57	47	43	33	22	6
48	56	46	41	31	21	5
50	55	45	40	30	20	5

47.4.4. COMMERCIAL / INDUSTRIAL

Depreciation for Commercial and Industrial properties is applied on a line-by-line basis rather than one rate for the overall structure. The Replacement Cost New (RCN) of the Main Building as described on the Exterior/Interior line is calculated, then added to that figure is the RCN of the Building Other Features attached to the line. The resulting sum is multiplied by the Percent Good as indicated by the Physical Condition and Functional Utility of the individual Exterior/Interior line to derive a Replacement Cost New Less Depreciation (RCNLD). The RCNLD's of each line are then summed to obtain the Total RCNLD of the structure. The tables in this Section have been provided as guidelines to assist the appraiser in arriving at the resultant estimate of the diminishing value of improvements after subtracting all forms of depreciation.

47.4.4.1. Common Causes of Obsolescence

In the final analysis, an estimate of depreciation or value loss represents an opinion of the appraiser as to the degree that the present and future appeal of a property has been diminished by deterioration and obsolescence. The accuracy of the estimate will be a product of the appraiser's experience in recognizing the symptoms of deterioration and obsolescence and the appraiser's ability to exercise sound judgment in equating the observations to the proper monetary allowance to be deducted from the Replacement Cost New. The following is a listing of some of the most common sources of functional and economic obsolescence which should further assist the appraiser in arriving at a reasonable estimate of obsolescence.

Common Causes of Functional Obsolescence

- Poor ratio of land area to building area.
- Inadequate parking, and/or truck and railroad loading and unloading facilities.
- An appearance unattractive and inconsistent with present use and surrounding properties.
- Poor proportion of office, rental, or manufacturing, and warehouse space.
- Inadequate or unsuited utility space.

- Limited use and excessive material and product handling costs caused by irregular and inefficient floor plans, varying floor elevations, inadequate clearance, and cut up interiors with small bays and an excessive number of walls, posts, and columns.
- High maintenance costs resulting from mixed building constructions, and/or the use of obsolete building materials.
- Multi-story design when single story would be more efficient and economical.
- Excessive or deficient floor load capacity.
- Insufficient and inadequate elevator service.
- Effects of corrosion created by manufacturing, processing, or storing of chemicals, etc.
- Foundation and structural failures due to poor soil conditions, poor design, excessive loading, poor maintenance, excessive vibration of building and process equipment.
- Inadequate power distribution, heating, ventilation, air conditioning, or lighting systems.

Common Causes of Economic Obsolescence

- Zoning laws and other governmental regulations which affect the usage and operation of the property.
- Building code requirements which set current acceptable construction standards.
- Market acceptability of the product or services for which the property was constructed or is currently used.
- Profitability of the operation of the property and the justifiable investment which the business would support.
- Termination of the need for the property due to actual or probable changes in economic or social conditions.

PART 4: REPLACEMENT COST

47.4.4.2. Economic Life Tables

The following two tables detail the expected normal economic life of Commercial/Industrial structures and Commercial Other Building and Yard Improvements. This information can also be found in the Commercial and Industrial Cost Tables.

The economic life of an improvement is part of the calculation to derive the Percent Good of the improvement.

NORMAL ECONOMIC LIFE TABLE FOR COMMERCIAL / INDUSTRIAL STRUCTURES

STRUCTURE TYPE CODE	DESCRIPTION	CONSTRUCTION CLASS	
		Wood Frame / Joist / Beam or Pre-Engineered Steel	Fire Resistant or Fireproof
101	Residential, One Family	40	---
102	Residential, Two Family	40	---
103	Residential, Three Family	40	---
104	Residential, Four Family	40	---
105	Mixed Residential/Commercial (built as Residential)	40	---
106	Condominium (common element)	40	---
107	Condominium (fee simple)	40	---
108	Condominium (time share)	40	---
211	Apartment, Garden (3 story & less)	40	50
212	Apartment, High Rise	---	50
213	Townhouse/Rowhouse	40	---
314	Hotel/Motel, High Rise (5 stories and up)	---	50
315	Hotel/Motel, Low Rise (1 to 4 stories)	30	40
316	Nursing Home	50	50
318	Boarding or Rooming House	40	50
319	Mixed Residential/Commercial (built as Commercial)	40	50
321	Restaurant	40	40
325	Fast Food	20	20
327	Bar or Lounge	30	40
328	Night Club/Dinner Theatre	30	40
331	Auto Dealer, Full Service	30	40
332	Auto/Equipment Service Garage	30	40
333	Service Station (full service)	20	20
334	Service Station (self service)	20	20
335	Truck Stop	30	40
336	Car Wash (manual)	20	20
337	Car Wash (automatic)	30	40
338	Parking Garage/Deck	---	40
340	Super Regional Shopping Mall	40	50
341	Regional Shopping Mall	40	50
342	Community Shopping Center	40	50
343	Neighborhood Shopping Center	30	40
344	Strip Shopping Center	30	40

NORMAL ECONOMIC LIFE TABLE FOR COMMERCIAL / INDUSTRIAL STRUCTURES (Cont'd)

STRUCTURE TYPE CODE	DESCRIPTION	CONSTRUCTION CLASS	
		Wood Frame / Joist / Beam or Pre-Engineered Steel	Fire Resistant or Fireproof
345	Discount Department Store	40	50
346	Department Store	40	50
347	Supermarket	30	40
348	Convenience Food Market	30	40
349	Medical Office Building	40	50
350	Drive-up Bank	40	50
351	Bank	40	60
352	Savings Institution	40	50
353	Office Building, Low Rise (1 to 4 stories)	40	50
354	Office Building, High Rise (5 stories and up)	---	60
355	Office Condominium	40	50
356	Retail Condominium	40	50
361	Funeral Home	40	50
362	Veterinary Clinic	30	40
363	Legitimate Theatre	---	60
364	Motion Picture Theatre	40	50
365	Cinema/Theatre	30	40
367	Social or Fraternal Hall	30	40
368	Hangar	30	40
369	Day Care Center	30	40
371	Downtown Row Type	40	50
373	Retail - Single Occupancy	30	40
374	Retail - Multi Occupancy	30	40
375	Retail - Drive-Up	30	40
391	Cold Storage Facility	30	40
392	Lumber Storage	20	30
395	Truck Terminal	30	40
396	Mini Warehouse	30	40
397	Office/Warehouse	40	50
398	Warehouse	30	40
399	Warehouse, Prefab	30	---
381	Bowling Alley	30	40
382	Skating Rink	30	40
383	Health Spa	30	40
384	Swimming Pool, Indoor	20	30
385	Tennis Club, Indoor	30	40
386	Racquet Club, Indoor	30	40
387	Country Club	40	50
388	Club House	30	40
389	Country Club with Golf Course	40	50
401	Manufacturing & Processing	40	50
405	Research & Development	40	50
610	Library	50	60
611	School	50	60
612	College or University	50	60
613	Dormitories	50	60

PART 4: REPLACEMENT COST

NORMAL ECONOMIC LIFE TABLE FOR COMMERCIAL / INDUSTRIAL STRUCTURES (Cont'd)

STRUCTURE TYPE CODE	DESCRIPTION	CONSTRUCTION CLASS	
		Wood Frame / Joist / Beam or Pre-Engineered Steel	Fire Resistant or Fireproof
614	Churches	50	60
620	Auditorium	50	60
640	Hospital	50	60
650	Post Office	50	60
660	Police or Fire Station	50	60
670	Correctional Facilities	50	60
680	Cultural Facility	50	60
690	Rail/Bus/Air Terminal	50	60
710	Telephone Equipment Building	50	60
715	Telephone Service Garage	30	40
720	Radio/TV Transmitter Building	30	40
725	Radio, TV or Motion Picture Studio	40	50

NORMAL ECONOMIC LIFE TABLE FOR COMMERCIAL / INDUSTRIAL OTHER BUILDING AND YARD IMPROVEMENTS

OBY CODE	DESCRIPTION	ECONOMIC LIFE	OBY CODE	DESCRIPTION	ECONOMIC LIFE
AC1	Air Conditioning, central	15	DH1	Drive House, wd & mtl, good	35
AC2	Air Conditioning, unit	15	DH2	Drive House, wd & mtl, avg	35
AN1	Annex, wood crib	30	DH3	Drive House, wd & mtl, low	35
AN2	Annex, concrete	50	DH4	Drive House, conc, good	50
BC1	Bank Drive-In, canopy	40	DH5	Drive House, conc, avg	50
BC2	Bank Drive-In, teller booth	15	DH0	Drive House, conc, low cost	50
BD1	Boat Dock, light wood deck, light post	15	DT1	Drive-In Theater Screen	20
BD2	Boat Dock, medium wood deck, wood girders	20	EL1	Elevators, wood crib	40
BD3	Boat Dock, heavy wood deck, heavy pilings	30	EL2	Elevators, concrete	50
BB1	Boat House, frame or concrete block	20	RF1	Fence, chain link	20
BB2	Boat House, masonry	30	RF2	Fence, picket	20
BS1	Boat Slip, economy	20	RF3	Fence, stockade	20
BS2	Boat Slip, average	20	RF4	Fence, post & rail	20
BS3	Boat Slip, good	20	RF5	Fence, basketweave	20
BK1	Bulkhead	20	RF6	Fence, brick or masonry	30
CP5	Canopy Roof, low cost	20	RF7	Fence, ornamental iron	30
CP6	Canopy Roof, average	20	RF8	Fence, 4 strand barbed wire	20
CP7	Canopy Roof, good	20	RF9	Fence, stock yard corrals	20
RC1	Carport	20	RF0	Fence, pipe & post	20
			FS1	Flat Storage, wood	30
			FS2	Flat Storage, metal	30
			AU1	Fuel Storage Tank, undergrd	20
			AU2	Fuel Storage Tank, abovegrd	30
			AU3	Fuel Storage Tank, horizontal pressure	25

**NORMAL ECONOMIC LIFE TABLE FOR COMMERCIAL / INDUSTRIAL
OTHER BUILDING AND YARD IMPROVEMENTS (Cont'd)**

OBY CODE	DESCRIPTION	ECONOMIC LIFE	OBY CODE	DESCRIPTION	ECONOMIC LIFE
RG1	Garage, detach, frame, fin	40	SH1	Shed, machinery	30
RG2	Garage, detach, mas, fin	40	SH2	Shed, aluminum	30
RG3	Garage, detach, frame, unfin	40	SH3	Shed, finished metal	30
RG4	Garage, detached, mas, unfin	40	SH4	Shed, quonset	30
GH1	Greenhouse, economy	20	SH5	Shed, lumber, frame, 2 sides open	20
GH2	Greenhouse, average	20	SH6	Shed, lumber, frame, 4 sides open	20
GH3	Greenhouse, good	20	CA1	Scales, platform	30
KF1	Kioska (Fotomat, etc.)	20	CA2	Scales, truck	30
LT1	Light, mercury vapor, wall mounted	20	CA3	Scales, cattle	30
LT2	Light, incandescent, wall mounted	20	SK1	Skating Rink, outdoor, ice skating	20
LT3	Light, fluorescent, pole & bracket	20	SS1	Sprinkler System, wet pipe	20
LT4	Light, incandescent, pole & bracket	20	SS2	Sprinkler System, dry pipe	20
LT5	Light, mercury vapor, pole & bracket	20	RP5	Swimming Pool, outdoor, commercial	20
MS1	Misc Structure Value	---	TA1	Tanks, wooden	20
PA1	Paving, asphalt	15	TA2	Tanks, corrugated steel	20
PA2	Paving, concrete, 4"	15	TA3	Tanks, corrug steel hopper	20
PA3	Paving, concrete, 5"-6"	15	TA4	Tanks, welded steel	30
PB1	Plumbing Fixture	20	TA5	Tanks, welded steel hopper	30
RR1	Railroad Trackage (spurs)	20	TA6	Tanks, bolted steel	30
TR1	Restroom Structure, frame/concrete block	30	TA7	Tanks, fiberglass	35
TR2	Restroom Structure, brick or stone	40	TA0	Tanks, other	25
GS1	Service Station Attendant's booth, steel or glass on masonry	20	TC1	Tennis Court, asphalt	15
GS2	Service Station Attendant's booth, stucco or glass on frame	20	TC2	Tennis Court, concrete	15
			TC3	Tennis Court, clay	15
			TU1	Tunnel, grain elevators	20
			RS1	Utility Building, frame	20
			RS2	Utility Building, metal	20
			RS3	Utility Build, brick/stone	20

47.4.4.3. Physical Condition / Functional Utility Rating

The Percent Good of an improvement is a function of three items. The first component is the observed age of the structure. The observed age is calculated by subtracting either the Year Built or, if entered, the Effective Year Built from the Appraisal Year. The Appraisal Year is a

computer system date that is user set generally to the date of appraisal for the jurisdiction.

The second component to calculate a Percent Good is the physical condition of the improvement. And the final third component, is the improvement's functional utility.

PART 4: REPLACEMENT COST

The Physical Condition and Functional Utility ratings are combined in the following table to determine the Physical Condition/Functional Utility Rating. This rate is then used to establish the Bottom-out Percentage Good of the Exterior/Interior Line at the end of the structure's economic life.

A Physical Condition/Functional Utility Rating is determined for each Exterior/Interior Line of a Commercial structure.

PHYSICAL CONDITION / FUNCTIONAL UTILITY RATING TABLE

PHYSICAL CONDITION	FUNCTIONAL UTILITY RATING				
	Good	Normal	Fair	Poor	None
Excellent	1	2	3	5	6
Good	1	2	4	6	7
Normal	2	3	5	6	8
Fair	4	5	6	8	10
Poor	6	7	8	9	10

The Bottom-out Percentage Good is determined by use of both the Physical Condition/Functional Utility Rating found above and Depreciation Table Number found in the Main Building Structure Type Code Table of the Commercial and Industrial Cost program.

The Depreciation Table Number indicates the "row" and the Physical Condition/Functional Utility Rating indicates the "column" to determine the Bottom-out Percentage Good of the improvement.

For example: The first floor of a Bank (Structure Code = 351) has been inspected and it is determined that the Physical Condition should be rated Good (code=4) and the Functional Utility is rated Normal (code=3). Using the above table the Physical Condition/Functional Utility Rating is 2. The Depreciation Table Number from the Main Building Structure Type Code Table for a Bank is 01. Using the Main Building Depreciation Table in the Commercial Cost program the Percent Good is .60.

EXAMPLE OF MAIN BUILDING DEPRECIATION TABLE

MAIN BUILDING STRUCTURE TYPE CODE DEPRECIATION TABLE										
RECORD NUM	PERCENT GOOD AT END OF EXPECTED LIFE BASED ON CDU LEVEL									
	1	2	3	4	5	6	7	8	9	10
001	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05
002	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05
003	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05
004	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05
005	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05
006	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05
007	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05
008	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05
009	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05
010	0.70	0.60	0.50	0.45	0.40	0.35	0.30	0.20	0.10	0.05

47.4.4.4. Main Building Percent Good Calculation

The Percent Good (PG) calculation uses the Economic Life of the structure; the Year Built, either the actual Year Built or the calculated Effective Year Built; the Appraisal Year, the computer system Appraisal Year of valuation; and the Bottom-out Percent Good, in the following calculation.

$$PG = \frac{1}{1 + [X (1-X)] + A X^2}$$

$$\text{where } A = \frac{1}{\text{Bottom-out Percent Good}} - 1$$

$$\text{where } X = \frac{\text{Appraisal Year} - \text{Year Built}}{\text{Economic Life}}$$

NOTE: If (Appraisal Year - Year Built) is less than the Economic Life use X, otherwise use 1.

47.4.4.5. Commercial OBY Percent Good Calculation

The Percent Good calculation for Commercial Other Building and Yard Improvements is the same as for the Main Building with the addition of a Desirability Factor.

The Bottom-out Percent Good is calculated in the same fashion as outlined in Paragraph 47.4.4.3 - Physical Condition/Functional Utility Rating.

The modified OBY Percent Good calculation formula is:

$$PG = \frac{1}{1 + [X (1-X)] + A X^2}$$

$$\text{where } A = \frac{1}{\text{Bottom-out Percent Good} / \text{Desirability Factor}} - 1$$

$$\text{where } X = \frac{\text{Appraisal Year} - \text{Year Built}}{\text{Economic Life}}$$

NOTE: If (Appraisal Year - Year Built) is less than the Economic Life use X, otherwise use 1.

47.4.4.6. Commercial Percent Good Tables

Seven examples of Commercial Percent Good tables have been provided to demonstrate the effect that various years of economic life and bottom out percentages have on the calculated Percent Good.

15 YEAR ECONOMIC LIFE TABLE

AGE IN YEARS	PHYSICAL CONDITION AND / OR FUNCTIONAL UTILITY RATING									
	1	2	3	4	5	6	7	8	9	10
1	94	94	94	94	94	93	93	93	91	87
2	89	89	88	88	88	87	86	84	78	69
3	85	84	83	83	82	81	80	76	66	52
4	82	80	79	78	77	75	73	68	54	39
5	79	77	75	74	72	70	68	60	45	30
6	76	74	71	70	68	65	62	53	37	23
7	75	72	68	66	63	60	57	47	31	19
8	73	70	65	63	60	56	52	42	26	15
9	72	68	63	60	56	52	48	37	22	12
10	71	66	60	57	53	49	44	33	19	10
11	70	64	58	54	50	46	41	30	17	9
12	70	63	56	51	47	43	38	27	14	8
13	70	62	54	49	45	40	35	24	13	6
14	70	61	52	47	42	37	32	22	11	6
15	70	60	50	45	40	35	30	20	10	5

PART 4: REPLACEMENT COST

20 YEAR ECONOMIC LIFE TABLE

AGE IN YEARS	PHYSICAL CONDITION AND / OR FUNCTIONAL UTILITY RATING									
	1	2	3	4	5	6	7	8	9	10
1	95	95	95	95	95	95	95	95	93	91
2	91	91	91	91	90	90	90	88	85	78
3	88	88	87	87	86	86	85	82	75	64
4	85	84	83	83	82	81	80	76	66	52
5	82	81	80	79	78	77	75	70	57	42
6	80	79	77	76	74	73	70	64	50	34
7	78	76	74	73	71	69	66	58	43	28
8	76	74	71	70	68	65	62	53	37	23
9	75	72	69	67	64	62	58	49	33	20
10	74	71	67	64	62	58	55	44	29	17
11	73	69	65	62	59	55	51	41	25	14
12	72	68	63	60	56	52	48	37	22	12
13	71	66	61	57	54	50	45	34	20	11
14	70	65	59	55	51	47	42	32	18	10
15	70	64	57	53	49	45	40	29	16	8
16	70	63	56	51	47	43	38	27	14	8
17	70	62	54	50	45	40	36	25	13	7
18	70	61	53	48	43	39	34	23	12	6
19	70	61	51	46	42	37	32	21	11	5
20	70	60	50	45	40	35	30	20	10	5

30 YEAR ECONOMIC LIFE TABLE

AGE IN YEARS	PHYSICAL CONDITION AND / OR FUNCTIONAL UTILITY RATING									
	1	2	3	4	5	6	7	8	9	10
1	97	97	97	97	97	97	97	96	96	95
2	94	94	94	94	94	93	93	93	91	87
3	91	91	91	91	90	90	90	88	85	78
4	89	89	88	88	88	87	86	84	78	69
5	87	86	86	85	85	84	83	80	72	60
6	85	84	83	83	82	81	80	76	66	52
7	83	82	81	80	79	78	77	72	60	45
8	82	80	79	78	77	75	73	68	54	39
9	80	79	77	76	74	73	70	64	50	34
10	79	77	75	74	72	70	68	60	45	30
11	78	76	73	72	70	67	65	56	41	26
12	76	74	71	70	68	65	62	53	37	23
13	75	73	70	68	65	63	59	50	34	21
14	75	72	68	66	63	60	57	47	31	19
15	74	71	67	64	62	58	55	44	29	17
16	73	70	65	63	60	56	52	42	26	15
17	72	69	64	61	58	54	50	40	24	14
18	72	68	63	60	56	52	48	37	22	12
19	71	67	61	58	55	51	46	35	21	11
20	71	66	60	57	53	49	44	33	19	10
21	70	65	59	55	51	47	42	32	18	10
22	70	64	58	54	50	46	41	30	17	9
23	70	64	57	53	49	44	39	28	15	8
24	70	63	56	51	47	43	38	27	14	8
25	70	62	55	50	46	41	36	26	14	7
26	70	62	54	49	45	40	35	24	13	6
27	70	61	53	48	43	39	34	23	12	6
28	70	61	52	47	42	37	32	22	11	6
29	70	60	51	46	41	36	31	21	11	5
30	70	60	50	45	40	35	30	20	10	5

47. DEPRECIATION

40 YEAR ECONOMIC LIFE TABLE

AGE IN YEARS	PHYSICAL CONDITION AND / OR FUNCTIONAL UTILITY RATING									
	1	2	3	4	5	6	7	8	9	10
1	98	98	98	98	98	98	97	97	97	97
2	95	95	95	95	95	95	95	95	93	91
3	93	93	93	93	93	93	92	92	89	85
4	91	91	91	91	90	90	90	88	85	78
5	90	89	89	89	88	88	87	85	80	71
6	88	88	87	87	86	86	85	82	75	64
7	86	86	85	85	84	83	82	79	70	58
8	85	84	83	83	82	81	80	76	66	52
9	84	83	82	81	80	79	77	73	61	47
10	82	81	80	79	78	77	75	70	57	42
11	81	80	78	77	76	75	73	67	53	38
12	80	79	77	76	74	73	70	64	50	34
13	79	78	75	74	73	71	68	61	46	31
14	78	76	74	73	71	69	66	58	43	28
15	77	75	73	71	69	67	64	56	40	26
16	76	74	71	70	68	65	62	53	37	23
17	76	73	70	68	66	63	60	51	35	21
18	75	72	69	67	64	62	58	49	33	20
19	74	71	68	66	63	60	56	46	30	18
20	74	71	67	64	62	58	55	44	29	17
21	73	70	66	63	60	57	53	43	27	15
22	73	69	65	62	59	55	51	41	25	14
23	72	68	63	61	57	54	50	39	24	13
24	72	68	63	60	56	52	48	37	22	12
25	71	67	62	58	55	51	47	36	21	12
26	71	66	61	57	54	50	45	34	20	11
27	71	66	60	56	53	48	44	33	19	10
28	70	65	59	55	51	47	42	32	18	10
29	70	65	58	54	50	46	41	30	17	9
30	70	64	57	53	49	45	40	29	16	8
31	70	64	56	52	48	44	39	28	15	8
32	70	63	56	51	47	43	38	27	14	8
33	70	63	55	51	46	42	37	26	14	7
34	70	62	54	50	45	40	36	25	13	7
35	70	62	53	49	44	40	35	24	13	6
36	70	61	53	48	43	39	34	23	12	6
37	70	61	52	47	43	38	33	22	11	6
38	70	61	51	46	42	37	32	21	11	5
39	70	60	51	46	41	36	31	21	10	5
40	70	60	50	45	40	35	30	20	10	5

50 YEAR ECONOMIC LIFE TABLE

AGE IN YEARS	PHYSICAL CONDITION AND / OR FUNCTIONAL UTILITY RATING									
	1	2	3	4	5	6	7	8	9	10
1	98	98	98	98	98	98	98	98	98	97
2	96	96	96	96	96	96	96	96	95	94
3	95	94	94	94	94	94	94	93	92	89
4	93	93	93	92	92	92	92	91	88	84
5	91	91	91	91	90	90	90	88	85	78
6	90	90	89	89	89	88	88	86	81	73
7	89	88	88	87	87	86	86	83	77	67
8	87	87	86	86	85	85	84	81	73	62
9	86	86	85	84	84	83	82	78	69	57
10	85	84	83	83	82	81	80	76	66	52
11	84	83	82	81	80	79	78	73	62	48
12	83	82	81	80	79	78	76	71	59	44
13	82	81	79	78	77	76	74	68	56	40
14	81	80	78	77	76	74	72	66	52	37
15	80	79	77	76	74	73	70	64	50	34
16	79	78	76	74	73	71	69	61	47	32
17	78	77	75	73	72	69	67	59	44	29
18	78	76	74	72	70	68	65	57	42	27
19	77	75	72	71	69	66	64	55	39	25
20	76	74	71	70	68	65	62	53	37	23
21	76	73	70	69	66	64	60	51	35	22
22	75	73	69	67	65	62	59	49	33	20
23	75	72	68	66	64	61	57	48	32	19
24	74	71	68	65	63	60	56	46	30	18
25	74	71	67	64	62	58	55	44	29	17
26	73	70	66	63	60	57	53	43	27	16
27	73	69	65	62	59	56	52	41	26	15
28	72	69	64	61	58	55	51	40	25	14
29	72	68	63	60	57	54	49	39	23	13
30	72	68	63	60	56	52	48	37	22	12
31	71	67	62	59	55	51	47	36	21	12
32	71	67	61	58	54	50	46	35	20	11
33	71	66	60	57	53	49	45	34	19	11
34	71	66	60	56	52	48	44	33	19	10
35	70	65	59	55	51	47	42	32	18	10
36	70	65	58	54	51	46	41	31	17	9
37	70	64	57	54	50	45	40	30	16	9
38	70	64	57	53	49	44	40	29	16	8
39	70	63	56	52	48	43	39	28	15	8
40	70	63	56	51	47	43	38	27	14	8
41	70	63	55	51	46	42	37	26	14	7
42	70	62	54	50	46	41	36	25	13	7
43	70	62	54	49	45	40	35	25	13	7
44	70	62	53	49	44	39	34	24	12	6
45	70	61	53	48	43	39	34	23	12	6
46	70	61	52	47	43	38	33	22	12	6
47	70	61	52	47	42	37	32	22	11	6
48	70	61	51	46	41	36	31	21	11	5
49	70	60	51	46	41	36	31	21	10	5
50	70	60	50	45	40	35	30	20	10	5

PART 4: REPLACEMENT COST

60 YEAR ECONOMIC LIFE TABLE											70 YEAR ECONOMIC LIFE TABLE										
AGE IN YEARS	PHYSICAL CONDITION AND / OR FUNCTIONAL UTILITY RATING										AGE IN YEARS	PHYSICAL CONDITION AND / OR FUNCTIONAL UTILITY RATING									
	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10
1	98	98	98	98	98	98	98	98	98	98	1	99	99	99	99	99	99	99	99	98	98
2	97	97	97	97	97	97	97	96	96	95	2	97	97	97	97	97	97	97	97	97	96
3	95	95	95	95	95	95	95	95	93	91	3	96	96	96	96	96	96	96	95	95	93
4	94	94	94	94	94	93	93	93	91	87	4	95	95	95	95	94	94	94	94	92	90
5	93	93	92	92	92	92	92	91	88	83	5	94	93	93	93	93	93	93	92	90	86
6	91	91	91	91	90	90	90	88	85	78	6	92	92	92	92	92	92	91	90	87	82
7	90	90	90	89	89	89	88	86	82	73	7	91	91	91	91	90	90	90	88	85	78
8	89	89	88	88	88	87	86	84	78	69	8	90	90	90	90	89	89	88	87	82	74
9	88	88	87	87	86	86	85	82	75	64	9	89	89	89	88	88	88	87	85	79	70
10	87	86	86	85	85	84	83	80	72	60	10	88	88	88	87	87	86	85	83	77	66
11	86	85	85	84	83	82	81	78	69	56	11	87	87	86	86	86	85	84	81	74	62
12	85	84	83	83	82	81	80	76	66	52	12	87	86	85	85	84	84	83	79	71	59
13	84	83	82	81	81	80	78	74	63	49	13	86	85	84	84	83	82	81	78	68	55
14	83	82	81	80	79	78	77	72	60	45	14	85	84	83	83	82	81	80	76	66	52
15	82	81	80	79	78	77	75	70	57	42	15	84	83	82	82	81	80	78	74	63	49
16	82	80	79	78	77	75	73	68	54	39	16	83	83	81	81	80	79	77	72	61	46
17	81	80	78	77	76	74	72	66	52	37	17	83	82	80	80	79	77	76	70	58	43
18	80	79	77	76	74	73	70	64	50	34	18	82	81	80	79	78	76	74	69	56	41
19	79	78	76	75	73	71	69	62	47	32	19	81	80	79	78	76	75	73	67	54	38
20	79	77	75	74	72	70	68	60	45	30	20	81	79	78	77	75	74	72	65	52	36
21	78	76	74	73	71	69	66	58	43	28	21	80	79	77	76	74	73	70	64	50	34
22	78	76	73	72	70	67	65	56	41	26	22	80	78	76	75	73	71	69	62	48	32
23	77	75	72	71	69	66	63	55	39	25	23	79	77	75	74	72	70	68	61	46	31
24	76	74	71	70	68	65	62	53	37	23	24	78	77	74	73	71	69	67	59	44	29
25	76	74	71	69	67	64	61	52	36	22	25	78	76	74	72	70	68	65	57	42	27
26	75	73	70	68	65	63	59	50	34	21	26	77	75	73	71	69	67	64	56	40	26
27	75	72	69	67	64	62	58	49	33	20	27	77	75	72	70	68	66	63	55	39	25
28	75	72	68	66	63	60	57	47	31	19	28	76	74	71	70	68	65	62	53	37	23
29	74	71	67	65	62	59	56	46	30	18	29	76	74	71	69	67	64	61	52	36	22
30	74	71	67	64	62	58	55	44	29	17	30	76	73	70	68	66	63	60	51	35	21
31	73	70	66	63	61	57	53	43	27	16	32	75	72	69	67	64	61	58	48	32	19
32	73	70	65	63	60	56	52	42	26	15	34	74	71	67	65	62	59	56	46	30	17
33	73	69	65	62	59	55	51	41	25	14	36	73	70	66	64	61	57	54	43	28	16
34	72	69	64	61	58	54	50	40	24	14	38	73	69	65	62	59	56	52	41	26	15
35	72	68	63	60	57	53	49	38	23	13	40	72	68	64	61	58	54	50	39	24	13
36	72	68	63	60	56	52	48	37	22	12	42	72	68	63	60	56	52	48	37	22	12
37	71	67	62	59	55	51	47	36	21	12	44	71	67	61	58	55	51	46	36	21	11
38	71	67	61	58	55	51	46	35	21	11	46	71	66	60	57	53	49	45	34	20	11
39	71	66	61	57	54	50	45	34	20	11	48	71	65	59	56	52	48	43	32	18	10
40	71	66	60	57	53	49	44	33	19	10	50	70	65	58	55	51	46	42	31	17	9
42	70	65	59	55	51	47	42	32	18	10	52	70	64	57	54	50	45	40	29	16	9
44	70	64	58	54	50	46	41	30	17	9	54	70	64	56	53	48	44	39	28	15	8
46	70	64	57	53	49	44	39	28	15	8	56	70	63	56	51	47	43	38	27	14	8
48	70	63	56	51	47	43	38	27	14	8	58	70	63	55	50	46	41	36	26	14	7
50	70	62	55	50	46	41	36	26	14	7	60	70	62	54	49	45	40	35	25	13	7
52	70	62	54	49	45	40	35	24	13	6	62	70	62	53	49	44	39	34	24	12	6
54	70	61	53	48	43	39	34	23	12	6	64	70	61	52	48	43	38	33	23	12	6
56	70	61	52	47	42	37	32	22	11	6	66	70	61	51	47	42	37	32	22	11	6
58	70	60	51	46	41	36	31	21	11	5	68	70	60	51	46	41	36	31	21	11	5
60	70	60	50	45	40	35	30	20	10	5	70	70	60	50	45	40	35	30	20	10	5

GLOSSARY

TABLE OF CONTENTS

G1.	ABBREVIATIONS	1	G2.	DEFINITIONS	5
G1.1.	SKETCH	1	G2.1.	ARCHITECTURAL TERMS	5
G1.2.	LAND AND LEGAL DESCRIPTIONS	2	G2.2.	DATA PROCESSING TERMS	10
G1.3.	MEASUREMENTS AND SYMBOLS	2	G2.3.	REAL ESTATE APPRAISAL TERMS	14
G1.4.	ARCHITECTURAL TERMS	3	G2.4.	STATISTICAL TERMS	23
G1.5.	GENERAL	4			

G1. ABBREVIATIONS

G1.1. SKETCH

1s LG	- One Story Log	CPF	- Carport Frame
1s MAS	- One Story Masonite	GRM	- Garage Masonry
1s ASB	- One Story Asbestos	GRF	- Garage Frame
1SF	- One Story Frame		
1s CMP	- One Story Composition	<u>1SF</u>	- One Story Frame Over
ISM	- One Story Brick	GRM	a Masonry Garage
1s AL	- One Story Aluminum		
1s Stn	- One Story Stone	OVHF	- Overhang - Frame
1s VN	- One Story Vinyl	OVHM	- Overhang - Masonry
1s CB	- One Story Concrete Block	BAYF	- Bay Window - Frame
1s ST	- One Story Steel	BAYM	- Bay Window - Masonry
1s Stu	- One Story Stucco	BOWF	- Bow Window - Frame
1 1/2s Fr	- One and One Half Story Frame	SPF	- Screened Porch Frame
2SF	- Two Story Frame	SPM	- Screened Porch Masonry
2SM	- Two Story Masonry	UTF	- Utility - Frame
2 1/2 SM	- Two and One Half Story Brick	UTM	- Utility - Masonry
OPF	- Open Porch Frame	HSF	- Half Story - Frame
OPM	- Open Porch Masonry	HSM	- Half Story - Masonry
EPF	- Enclosed Porch Frame	GREF	- Garage Extension - Frame
EPM	- Enclosed Porch Masonry	GREM	- Garage Extension - Masonry
<u>OPF</u>	- Open Porch Frame	CANF	- Canopy
<u>B</u>	With a Basement	B	- Basement
<u>EPF</u>	- Enclosed Porch Frame	BU	- Unfinished Basement
<u>ISM</u>	Over a One Story Brick	OBT	- Ornamental Brick Trim
<u>B</u>	With a Basement	D-WD	- Deck Wood
<u>A</u>	- Attic Over a One Story	D-CO	- Deck Concrete
<u>1SF</u>	Frame With a Basement	D-ST	- Deck Stone Tile
<u>B</u>		D-MS	- Deck Masonry Stoop
		AGH	- Attached Greenhouse
MHA	- Mobile Home Addition		
MET	- Mobile Home Expando or Tip Out		

GLOSSARY

G1.2. LAND AND LEGAL DESCRIPTIONS

AC	- Acre	L & B	- Land and Buildings
Acg	- Acreage	Mp	- Map
Act Frt	- Actual Frontage	Par	- Parcel
175' Av	- 175 Foot Average	Pg	- Page
Bk	- Book	Prop	- Property
CC	- Continuously Cropped	R 75'	- Rear Frontage of 75 Feet
CI	- Corner Influence	Rd	- Road
Calc Acg	- Calculated Acreage	R.O.W.	- Right-of-way
Dist	- District	Rtg No	- Routing Number
Eff Frt	- Effective Frontage	St	- Street
Eff D	- Effective Depth	Swr	- Sewer
EMF	- Economical Misimprovement Factor	TBR	- Timberland
Esmt	- Easement	Till	- Tillable
F	- Fallow	Topo	- Topography
F 33'	- Figured Frontage of 33 Feet	Twn	- Town
FR 56'	- Figured Rear Frontage of 56 Feet	Twp	- Township
FRM	- Farmstead	UD	- Undeveloped
Frt	- Frontage	UI	- Unimproved
G	- Grazing	Util	- Utility
HS	- Home Site	Vil	- Village
IF	- Influence Factor	WH	- Wild Hay
Imp	- Improvement	Wtr	- Water
I	- Irrigated	XF	- Excessive Frontage
Irr	- Irregular	XD	- Excessive Depth
LI	- Land Improvement	Zng	- Zoning

G1.3. MEASUREMENTS AND SYMBOLS

AC	- Acre	S/F or	- Square Feet
Acg	- Acreage	Sq Ft	
Bd Ft	- Board Feet	31 (6)	- 31 feet, 6 inches
BPD	- Barrels-Per-Day	Yd	- Yard
Brl	- Barrel	☐	- Square Feet
BTU	- British Thermal Unit	∅	- Cubic Feet
Bu	- Bushel	<u>S</u>	- Story
Cap	- Capacity	# (xx)	- Number
C/F or	- Cubic Feet	(xx) #	- Pounds
Cu/Ft		°	- Degree
Dbl	- Double	'	- Feet (or minutes)
Dia	- Diameter	"	- Inches (or seconds)
Ea	- Each	+	- Plus
Ft	- Feet	-	- Minus
Ga	- Gauge	±	- Plus or Minus
Gal	- Gallon	x	- Times or By
GPD	- Gallons-Per-Day	=	- Equals
Ht	- Height	>	- Is Greater Than
Lb	- Pound	<	- Is Lesser Than
L/F or	- Lincal Feet	π	- Pi (3.1416)
Lin ft		∞	- Infinity
No	- Number	@	- "AT," eg. 10 lbs.@1.00/lb
OC	- On Center		- Parallel

<	- Angle	└┐ _s	- Channels
<s	- Angles	/	- Per, eg. Price/Lb.
└	- Channel		

G1.4. ARCHITECTURAL TERMS

Apt	- Apartment	HP	- Horse Power
Art	- Artificial	Hse	- House
Asb	- Asbestos	I Bm	- I Beam
Att	- Attached	Incl	- Including
Bldg	- Building	I.D.	- Inside Diameter or Identification
Bsmt	- Basement	Int	- Interior
ASPH	- Asphalt Paving	Int Fin	- Interior Finish
CB	- Concrete Block	I-Com	- Intercom System
Clg	- Ceiling	Jst	- Joist
Cmt	- Cement	Lam	- Laminated
Col	- Column	Lndg	- Landing
Com	- Common	L & P	- Lath and Plaster
Comp	- Composition	Lav	- Lavatory
Conc	- Concrete	L & O	- Lead and Oil
Const	- Construction	Lt	- Light
Dbl	- Double	Ltg	- Lighting
DH	- Double Hung	Lts	- Lights
Dk	- Deck	Linol	- Linoleum
Dkg	- Decking	Mach	- Machine
Drs	- Doors	Mas	- Masonry
DP	- Double Pitch	Mech	- Mechanical
D & M	- Dressed and Matched	MF	- Mechanical Features
Dwl	- Dwelling	Met	- Metal
Elec	- Electric	Mezz	- Mezzanine
Elev	- Elevators	Misc	- Miscellaneous
Equip	- Equipment	Mono	- Monolithic
Excav	- Excavation	Obsol	- Obsolete, Obsolescence
Excl	- Excluding	OFF	- Office
Ext	- Exterior	OC	- On Center
Fibr Gls	- Fiberglass	1 E	- One End
Fin	- Finish	1 Sd	- One side
Fixt	- Fixtures	OF	- Other Feature
Flr	- Floor	O.D.	- Outside Diameter
Flrg	- Flooring	OH	- Overhead or Overhang
Ftg	- Footing	Pnt	- Paint
Fdtn	- Foundation	Par	- Parapet
Fr	- Frame	Pt	- Part
Fgt	- Freight	Ptn	- Partition
Galv	- Galvanized	PW	- Party Wall
GI	- Galvanized Iron	Pass	- Passenger
Gar	- Garage	Pav	- Paving
GLS	- Glass	Pil	- Pilaster
H Col	- H Column	Plk	- Plank
Hd Wd	- Hardwood	Plstr	- Plaster
Htr	- Heater	Plstrd	- Plastered
Htg	- Heating	Plbg	- Plumbing
HC	- Hollow Core	Pch	- Porch
Horiz	- Horizontal	Purl	- Purlin

GLOSSARY

Rec Room	- Recreation Room	Sup	- Supports
Rftr	- Rafter	Sys	- System
RR	- Railroad	T & G	- Tar and Gravel or Tongue and Groove
Refrig	- Refrigerated	Terr	- Terrace
Rein	- Reinforced	Tbr	- Timber
Rein Conc	- Reinforced Concrete	Toil	- Toilet
Ret WL	- Retaining Wall	TR	- Toilet Room
Rf	- Roof	Unfin	- Unfinished
Rfg	- Roofing	Urin	- Urinal
Rm	- Room	Ven	- Veneer
Shtg	- Sheathing	Vent	- Ventilator
Sdg	- Siding	Vit	- Vitrified
SP	- Single Pitch	VT	- Vitrified Tile
SS	- Slop Sinks	Wscf	- Wainscot
Sprink	- Sprinkler	Whse	- Warehouse
Sq	- Square	WC	- Water Closet
Strs	- Stairs	WP	- White Pine
Std	- Standard	WF	- Wide Flange
Stdg	- Standing	Wind	- Window
Stm	- Steam	Wir	- Wiring
Stl	- Steel	Wd	- Wood
Stl Pl	- Steel Plate	Wb Fp	- Woodburning Fireplace
Stge	- Storage	Yd	- Yard
		YP	- Yellow Pine

G1.5. GENERAL

Ag	- Agriculture	N/C	- New Construction
Asmt	- Assessment	NF	- Nothing Furnished
Av	- Average	NV	- No Value or No Vector
CDU	- Condition, Desirability, Usefulness	Obsol	- Obsolete or Obsolescence
C & D	- Cost and Design Property	PIF	- Priced In Field
CID	- Commercial/Industrial Data	PP	- Personal Property
Comm	- Commercial	PRC	- Property Record Card
DCC	- Data Collection Card	PU	- Public Utility
Depr	- Depreciation	RAD	- Residential/Agricultural Data
EDP	- Electronic Data Processing	RCN	- Replacement Cost New
Est	- Estimate(d)	RCNLD	- Replacement Cost New Less Depreciation
Ex	- Exempt or Excellent	Res	- Residential
Excl	- Excluding	RV	- Replacement Value
F.V.	- Flat Value	Sched	- Schedule
Gr	- Grade Value	SV	- Sound Value or Site Value
I & E	- Income and Expense	T or Tot	- Total
Incl	- Including	UF	- Utilities Furnished or Unfurnished
Ind	- Industrial	Utl Val	- Utility Value
LDS	- Live Data System	Val	- Value
N/A	- Not Applicable		

G2. DEFINITIONS

G2.1. ARCHITECTURAL TERMS

apartment hotel

A building designed for non-transient residential use, divided into dwelling units similar to an apartment house, but having such hotel accommodations as room furnishings, lounges, public dining room, maid service, etc.

apartment house

A multi-family residence containing five or more non-transient residential living units and generally providing them with a number of common facilities and services.

attic

An unfinished or finished portion of a building lying between the highest finished story and the roof, and wholly within the roof framing.

basement

A building story which is wholly or partly below the grade level.

bay

(1) A horizontal area division of a building usually defined as the space between columns or division walls. (2) An internal recess formed by causing a wall to project beyond its general line.

bay window

A window, or group of continuous windows, projecting from the main wall of a building and supported by a foundation.

beam

A long structural load-bearing member which is placed horizontally or nearly so and which is supported at both ends or, infrequently, at intervals along its length.

beam, spandrel

A wall beam supporting the wall above, as well as the floor.

building

Any structure partially or wholly above ground which is designed to afford shelter to persons, animals, or goods. See also "construction."

building, fireproof

A building in which all parts carrying loads or resisting stresses and all exterior and interior walls, floors, and staircases are made of incombustible materials, and in which all metallic structural members are encased in materials which remain rigid at the highest probable temperature in case its contents are burned, or which provide ample insulation from such a temperature.

building, loft

A building having three or more stories with few or no interior bearing walls and designed for storage, wholesaling, or light industrial purposes.

building, single-purpose

A building designed for a specific purpose which cannot be used for another purpose without substantial alterations; e.g., a theater or church.

column

A structurally isolated vertical member which is at least 8 to 10 times as long as its least lateral dimension and which is designed to carry loads. Compare "pier."

conduit

A tube, pipe, or small artificial tunnel used to enclose wires or pipes or to convey water or other fluids.

construction, brick

A type of construction in which the exterior walls are bearing walls made of solid brick or brick and tile masonry.

construction, brick veneer

A type of construction in which the exterior walls are one-layer brick curtain walls backed by a wood frame or masonry block.

construction, fireproof

See "building, fireproof."

construction, mill

A type of construction in which the exterior walls are substantial masonry bearing walls, with structural framing of heavy timber posts and beams, and which is further characterized by an open design and by other safeguards against fire

GLOSSARY

hazards. Sometimes called "Slow-Burning Construction."

construction, reinforced concrete

A type of construction in which the principal structural members, such as the floors, columns, beams, etc., are made of concrete poured around isolated steel bars or steel meshwork in such a manner that the two materials act together in resisting forces.

construction, steel frame

A type of construction in which there is a framework of steel structural members for the support of all loads and the resistance of all stresses.

construction, wood frame

A type of construction in which there is a framework of wooden structural members for the support of all loads and the resistance of all stresses. Loosely called "Frame Construction."

coping

A special capping at the top of a wall, serving principally as a watershed.

cornice

A projecting element at the top of a wall, serving principally as a decoration or as part of the coping.

course

A uniform horizontal layer of brick, stone, terra cotta, shingles, or some other structural material, extending continuously around a building or along a wall.

court

An open space bordered on two or more sides by the walls of a single building, or of two or more buildings, and by a lot line or a yard on any side not so bordered.

dormer

(1) A relatively small structure projecting from a sloping roof. (2) A window set upright in the face of such a structure.

dwelling

Any building or portion thereof designed or occupied in whole or in part as a place of residence.

dwelling, attached

A multi-family dwelling in which the dwelling units are separated vertically by means of common or party walls. See "terrace."

dwelling, duplex

A two-family dwelling in which the two dwelling units are separated vertically, by means of a common or party wall, with a private street entrance for each, i.e., a two-family flat.

dwelling, multi-family

A building designed as a place of residence for two or more families or households.

dwelling, row

Any one of a series of similar single-family, two-family, or multi-family dwellings having one or more contiguous common, or party walls. Compare "Terrace"; "Dwelling, Duplex."

dwelling unit

Any room or group of rooms designed as the living quarters of one family or household, equipped with cooking and toilet facilities, and having an independent entrance from a public hall or from the outside.

eaves

The portion of a sloping roof which projects beyond the outside walls of a building.

elevation

A drawing representing a projection of any one of the vertical sides or vertical cross-sections of a building or of any other object. Compare "plan."

facade

The face of a building.

firewall

A wall of fire-resisting material erected between buildings, or two parts of a building, to prevent the spread of fire from one part to the other.

flashing

Small metal strips used to prevent leaking of roofs around chimneys, dormers, hips and valleys.

flat

(1) Any one floor of a building two or more stories high each floor of which constitutes a single dwelling unit and has a private street entrance. (2) The building containing two or more such floors. Compare "Dwelling, Duplex."

footing

A spreading base to a wall, column, or other supporting member, which serves to widen the ground area to which structural loads are transmitted.

foundation

The structural members below grade level, or below the first tier of beams above grade level, which transmit the load of a superstructure to the ground.

gable

(1) The triangular portion of a wall between the slopes of a double-sloping (i.e., gable) roof. (2) The whole of the wall containing such a triangular portion. (3) A portion of a building extending from the remainder of the building and covered with a gable roof.

girder

A large or principal beam used to support concentrated loads at isolated points along its length. (Girders usually support the beams and structure above).

header

(1) A structural member which is laid perpendicularly to a parallel series of similar members and against which the latter members abut. (2) A brick or other piece of masonry which is laid in a wall in such a manner that its longest dimension extends along the thickness of the wall. Contrast "Stretcher."

hip

(1) A sloping line along which two roof surfaces meet to form an external angle of more than 180 degrees. (2) A hip rafter. Compare "Ridge"; "Valley."

hotel

A building designed for transient or semi-transient residential use, divided into furnished single rooms and suites, and having such accommodations as lounges, public dining rooms and maid service, etc.

hotel, apartment

See "Apartment Hotel."

joist

One of a series of small parallel beams laid on edge and used to support floor and ceiling loads,

and usually supported in turn by larger beams and girders.

lintel

A beam over a wall opening, such as a door or window, designed to carry the load of the wall over such opening.

loft

An unpartitioned or relatively unpartitioned upper story of a building, designed for storage, wholesaling, or light manufacturing. See also "Building Loft." Also, an attic-like open space below the roof of a house or barn.

louver (or louver)

A ventilator containing slats which are placed lengthwise across the ventilator opening, each slat being slanted in such a manner as to overlap the next lower slat and to permit ventilation but exclude rain.

marquee

A flat roof-like structure which shelters a doorway, which has no floor beneath it, and which is usually supported wholly from the walls or the building.

mezzanine

A low story formed by placing a floor between what would ordinarily be the floor and ceiling of a high story. Note the mezzanine floor frequently has a smaller area than other floors and, if present at all, is usually between the first and second stories.

millwork

All of the wooden portions of a building, whether frame construction or otherwise, which are customarily purchased in finished form from a planing mill, such as doors, windows, trim, balusters, etc.

overhang

A finished portion of a building having full story height which extends beyond the foundation wall line on part of the ground story, or beyond the exterior walls of the ground story if part of any higher story.

overhead structure

Similar to overhang above ground story, as O.H. bridge or passage, O.H. walk, O.H. Addition.

GLOSSARY

partition

See "Wall, Partition."

pier

(1) A thick, solid mass of masonry which is fully or partially isolated from a structural standpoint and which is designed to transmit vertical loads to the earth. (2) A structure projecting from land into water for use in loading and unloading vessels. Compare "Column."

pilaster

A flat-faced pillar projecting somewhat from, but engaged in, the wall of a building and used for decorative purposes or to help support truss and girder loads or both.

pile

A heavy timber, metallic, or masonry pillar driven into the earth to form a foundation member.

pitch

The slope of any structural member, such as a roof or rafter, usually expressed as a simple fraction representing the rise per lateral foot.

plan

A drawing representing a projection of any one of the floors or horizontal cross-sections of a building or of the horizontal plane of any other object or area. Compare "Elevation."

purlin

A beam running along the underside of a sloping roof surface and at right angles to the rafters, used to support the common rafters, and usually supported in turn by larger structural members, such as trusses or girders (usually run along the length of building).

rafter

A structural member placed, as a rule, in a sloping position and used as the supporting element for the structural material forming the plane of the roof. See also "Purlin."

rafter, hip

A rafter placed in an inclined position to support the edges of two sloping roof surfaces which meet to form an external angle of more than 180 degrees.

rafter, valley

A rafter placed in an inclined position to support the edges of two sloping roof surfaces which meet

to form an external angle of less than 180 degrees.

ramp

An inclined walk or passage connecting two different floor levels and used in lieu of steps.

residence

See "Dwelling."

ridge

A horizontal line along which the upper edges of two roof surfaces meet to form an external angle of more than 180 degrees. Compare "Hip"; "Valley."

rise

(1) In general, any vertical distance. (2) Specifically, the rise of a roof, being the distance between the top of an exterior wall and the peak of the roof; the rise of a stair, being the distance from tread to tread.

roof

The top portion of a structure. Types of roofs include double-pitch, flat, gable, gambrel, hip, lean-to, single-pitch.

roof, curb (or curbed)

A roof with two slopes on each side.

roof, flat

A roof which is flat or sloped only enough to provide proper drainage.

roof, gable

A ridge roof ending in a gable.

roof, gambrel

A ridge roof with two slopes on each side, the lower having a steeper pitch.

roof, hip (or hipped)

(1) In general, any roof having one or more hips. (2) Usually, a roof with four sloping sides meeting along four hips or along four hips and a ridge. Compare "Roof, Pyramid."

roof, lean-to

(1) A roof having a single sloping side which is supported at the upper edge by the wall of an attached building or of a larger and higher portion of the same building (preferred). (2) Any roof with a single slope. Compare "Roof, Flat."

roof, mansard

A special type of curb roof in which the upper part of each of the four equally sloping sides is nearly horizontal, and the lower part is nearly vertical.

roof, monitor

A type of gable roof, commonly found on industrial buildings, having a small raised portion along the ridge with openings for the admission of light and air.

roof, pyramid

A hip roof having four sloping triangular sides, usually of equal pitch, meeting together at the peak.

roof, ridged

A roof having one or more ridges.

roof, saw tooth

A roof with a series of parallel sloping surfaces interspersed between a series of vertical surfaces which rise from the lower edges of such sloping surfaces and which contain windows for the admission of light and air.

roof, single pitch

Any roof with a single slope other than a lean-to roof.

sash

The wooden or metal framework in which the glass of a door or window is set.

sheathing

The covering, usually of rough lumber, placed immediately over studding or rafters.

sill

(1) The lower horizontal part of a door-case (the threshold) or of a window. (2) The lowest horizontal structural member of a frame building, upon which the superstructure is supported.

sleeper

A structural member laid horizontally on the ground or upon a masonry base as a support to a floor or other superstructures.

specifications

A detailed description of the dimensions, materials, quantities, structural procedures, etc., applicable to a projected or completed piece of construction.

story

That portion of a building enclosed by a floor, a ceiling, and the exterior walls.

story, ground

The first story lying wholly above the ground level. Synonymous with "First Story."

story, half (or one-half)

(1) For buildings with a mansard or gambrel roof, a finished portion of a building which lies above the wall plate or cornice and which has a usable floor area substantially less than that of the next lower story. (2) For all other buildings, a finished portion of a building which is above one or more full stories, which is wholly or partly within the roof frame and which has one or more exterior walls substantially lower than the full height of the story.

story, one

A building having no finished story above the ground story.

stretcher

A brick or other piece of masonry which is laid lengthwise in a wall. Contrast "Header."

strut

Any structural member which holds apart two or more other members by counteracting a pressure which tends to bring them together. Contrast "Tie."

stud

One of a series of small slender structural members placed vertically and used as the supporting element of exterior or interior walls. (Plural - "Studs" or "Studding.")

subfloor

The flooring laid directly on top of the floor joists but beneath the finish floor.

tenement

A building, usually of obsolete nature, designed primarily for non-transient residential use and divided into three or more dwelling units having common stairs, halls, and street entrances, and sometimes common bath and toilet rooms. Compare "Apartment House"; "Flat"; "Terrace."

terrace

(1) An unroofed level area covered with grass or masonry or both, raised above the surrounding

GLOSSARY

ground level, and having a vertical or sloping front. (2) A multi-family dwelling in which the dwelling units are separated vertically by means of common or party walls. Compare "Dwelling, Row"; "Dwelling, Duplex."

terra cotta

A hard-baked ceramic clay molded into decorative tiles, bricks, etc., and used particularly for facing and trim on buildings.

tie

Any structural member which binds together two or more members by counteracting a stress which tends to draw them apart. Contrast "Strut."

trim

(1) The finishing wood and plaster work of the interior of a building, such as the doors, windows, wainscoting, and molding. (2) The contrasting elements on the exterior of a building which serve no structural purpose, but are intended to enhance its appearance, e.g., the cornice. (3) Occasionally, the hardware of a house, such as locks, hinges, doorknobs, etc.

truss

A combination of structural pieces fastened together into a rigid open member which is supported at both ends and upon which loads are superimposed. Compare "Girder."

valley

A sloping line along which two roof surfaces meet to form an external angle of less than 180 degrees. Compare "Hip"; "Ridge."

veneer

An ornamental or protective layer of material covering a base of another substance which is typically of inferior quality.

wainscot (or wainscoting)

(1) A wooden facing on the lower portion of a contrasting interior wall. (2) By extension, a facing of marble tile, or the like, on the lower portion of interior walls.

wall

A vertical structure serving to enclose, support, divide; as one of the vertical enclosing sides of a building or room.

wall, bearing

A wall designed primarily to withstand vertical pressure in addition to its own weight.

wall, common

A single wall jointly used by two buildings or two sections of a single building.

wall, curtain

A non-bearing wall which is supported by columns, beams, or other structural members, and whose primary function is to enclose space.

wall, fire

See "Firewall."

wall, partition

An interior bearing or non-bearing wall which separates portions of a story. Synonymous with "Partition."

wall, party

A wall jointly used by two parties under easement agreement and erected at or upon a line separating two parcels of land held under different ownership.

wall, retaining

A wall designed primarily to withstand lateral pressures of earth or other filling or backing deposited behind it after construction.

window, bay

See "Bay Window."

window, dormer

See "Dormer."

wing

A subordinate part of a building extending from the main part, or any one of two or more substantially co-ordinate parts of a building which extend out from one or more common junctions.

G2.2. DATA PROCESSING TERMS

Batch

Refers to, in data processing, a quantity of work or programs, that are performed at one time.

BAUD

The rate in bits per second at which data is transmitted over a communications link. Since each character of data is usually comprised of eight bits, 150 characters, per second equals approximately 1200 baud.

binary

A characteristic or property involving a selection, choice, or condition in which there are two possibilities, such as the number representation with a radix of two.

bit

The smallest unit of information in the binary number system. An abbreviation of binary digits. Normally, a bit refers to one "on", while a no bit means zero "off".

block

A group of machine words considered or transported as a unit. In flowcharts, each block represents a logical unit of programming.

BPS

Bits per second. The number of bits transmitted in one second. The baud rate is normally expressed in bps, i.e. 1200, 2400, 9600, etc.

byte

A sequence of adjacent binary digits operated upon as a unit; a unit of computer storage capacity equal to eight binary bits which may represent one alphabetic character, one numeric digit (unpacked), or a special character.

calculator

A keyboard machine for the automatic performance of arithmetic operations.

CAMA or CAMAS

Computer-Assisted Mass Appraisal System - Utilizing data processing to compare parcels, calculate values, and maintain property characteristics to increase efficiency and accuracy in the appraisal process.

columns binary

Pertaining to the binary representation of data on punched cards in which adjacent positions in a column correspond to adjacent bits of data; each column in a 12-row card may be used to represent 12 consecutive bits of 36-bit word.

computer

A computational device distinguished by its high speed, programmable operation, and large memory.

computer program

A series of instructions, in a form acceptable to the computer, prepared so as to achieve a certain result.

CPU

Central Processing Unit - The heart of the computing system, which contains the arithmetic, logical, and control circuits necessary for the interpretation and execution of a program and controls the functioning of the entire system.

CRT

Cathode Ray Tube - See video display terminal.

data base

A minimally redundant stored collection of data. A collection of data maintained by a computer.

data base management

A combination of hardware and software that controls and processes all requests for data in data bases.

data element

The smallest unit of data stored on some medium to which a reference or none may be assigned.

data entry

The process of placing information into machine-readable form.

data path

The input-processing-output flow followed by data (often repeatedly) during normal computer operations.

data processing

Performing operations on machine-readable data, either with or without the use of a computer.

data structure

The particular form in which data are to be treated by the computer program: whether as whole numbers, decimal fractions, or alphabetic characters, and whether as single pieces of information or as related sets or arrays of data.

GLOSSARY

data verification

Checking the accuracy of data that has been placed into a data processing system.

direct access

An addressing scheme or random access storage medium that permits direct addressing of data locations.

disk file

A means for storing data on a magnetic disk or platter.

encode

To apply a set of rules specifying the manner in which data may be represented such that a subsequent decoding is possible.

feedback

The process of returning portions of the output of a machine, process, or system for use as input in a further operation.

flowchart

A graphical representation of the definition, analysis, or solution of a problem using symbols to represent operations, data flow, and equipment.

hard copy

Output that appears on paper.

hardware

The physical equipment in a data processing system.

indexed sequential

A file in which records are organized sequentially with indexes that permit quick access to individual records as well as rapid sequential processing.

kilobytes

(kilo = 1000, bytes = characters) byte: A form of saying a character - numerical, letter, or symbol, in machine-readable form. Data processing personnel measure the size of records by bytes, instead of number of characters. Exactly, a kilobyte (KB or K) has 1,024 "characters".

library

A collection of standard proven computer routines, usually kept on a library tape or random

access file, by which problems or portions of problems may be solved.

master file

A file of records containing a cumulative history or the results of accumulation; updated in each file processing cycle, and carried forward to the next cycle.

megabyte

(< 1 million bytes) This unit is quite large and is usually used to measure the volume of a file, a disc, etc.

memory

The part of the computer that stores the program, holds intermediate results, and various constant data. Same as storage.

modem

A contraction of "Modulator Demodulator." Its function is to interface with data processing devices and convert data to a form compatible for sending and receiving on normal voice or sound transmission facilities.

MRA

Multivariate Regression Analysis - Also called the least square method, is a mathematical method for producing a model for a dependent variable as a linear function of independent factors. As an example - the predicted sales price (dependent variable) is a function of independent factors such as Square Feet, Style, Neighborhood, etc.

multiplexor

A computer hardware device used as a screening agent to the main computer. It polls all the messages from all terminals and transmits one by one to the main computer. It also dispatches "messages" to receiving ends ... it can be compared to the secretary of a big boss!

multiprocessing

System software that enables several CPU's to be connected together to provide faster, more reliable computing.

multiprogramming

Systems software that enables the computer to run several programs simultaneously.

network

A group of computers linked by printed-circuit cards, cables and network software, that share resources, such as disk drives and printers.

object code

A compiled program that is ready to be loaded into the computer. Contrast with source code.

on-line

Peripheral equipment or devices in direct communication with the central processing unit, and from which information reflecting current activity is introduced into the data processing system as soon as it occurs.

operating system

The systems software that manages all other software in the computer (also known as an executive or monitor).

operator's instructions

These are sets of operation instructions which tell the operator what to do to get the jobs done on the computer. The instructions are designed for two types of operators: (1) Computer operators - run the computer, execute a job, mount a tape, etc. (2) Use operators - run different applications such as payroll, CAMA. The instructions tell them how to add a new record, delete a word, etc., either on a terminal or using cards.

output

Information that has been processed by the computer.

peripheral equipment

Units that work in conjunction with the computer, but are not part of the computer itself, such as tape reader, card reader, magnetic tape feed, high-speed printer, typewriter, etc.

printer

Hardware for outputting on paper.

program

The instructions that enable a computer to process data.

programming language

A system for coding instructions for computer processing.

random access

For device or media, the accessing of data by address rather than by sequence.

record

A collection of related items of data treated as a unit.

sequence

An arrangement of items of data according to a specified set of rules.

sequential processing

The procedure of processing data records in the same order that they occur.

sequential storage

Storing of data in sequential order.

software

The programs and routines used to extend the capabilities of computers, such as compilers, assemblers, routines, and subroutines. Also, all documents associated with a computer, e.g., manuals, circuit diagrams.

source

That which provides information to be entered into the computer.

source code

A set of instructions that are written in a programming language and that must be translated to machine language before the program can be run.

source document

A form containing raw data for entry into the computer.

source file

A computer program in high-level language code.

standard deviation

A statistical measure of the variation of a characteristic about its average value. Standard deviation is the square root of the variance of a characteristic about its average observed value. Variance is the sum of the squared deviations of each observed value from the average, divided by one less than the number of observations. For normally distributed observations, approximately 70% of the observations will fall within one standard deviation of the mean or average value.

GLOSSARY

storage

The retention of information in the computer system.

summary report

Output that displays only the end product of processing in a concise format.

system software

Computer software that provides overall housekeeping functions for the computer.

systems design

The development of a computer system (hardware and software) to suit a particular application, by using the program development cycle.

terminal

A device in a system or communication network at which point data can either enter or leave the system.

transaction file

A file containing transient data to be processed in combination with a master file.

turn-around document

A document or form prepared as output at one stage of the data processing cycle, and sent to a customer or other user with the intention of having it returned and used as input at a later stage.

unit record

A record in which all data concerning each item in a transaction is punched into one card.

variable

A quantity that, when identified by a symbolic name, can assume any of a given set of values.

verify

To determine whether a transcription of data or other operation has been accomplished accurately. To check the results of key punching.

video display terminal

Hardware for output on a television-style picture tube (cathode-ray tube or CRT).

word

A set of characters that occupies one storage location and is treated by the computer circuits as a unit and transported as such.

work station

A device that lets people transmit information to or receive information from a computer; for example, a display station or printer.

G2.3. REAL ESTATE APPRAISAL TERMS

abstract of values

A computer-printed report of appraised and/or assessed values for each parcel of real property in a given taxing district; generally sequenced geographically.

accrued depreciation

See depreciation.

actual age

The number of years elapsed since the original construction, as of the effective valuation date. Compare with effective age.

ad valorem tax

In reference to property, a tax based upon the value of the property.

aesthetic value

A value, intangible in nature, which is attributable to the pleasing appearance of a property.

agricultural property

Land and improvements devoted to or best adaptable for the production of crops, fruits and timber and the raising of livestock.

air rights

The right to the use of a certain specific space within the boundaries of a parcel of land and above a specified elevation.

alley influence

The enhancement to the value of a property rising out of the presence of an abutting alley; most generally applicable to commercial properties.

amenities

In reference to property, the intangible benefits arising out of ownership, amenity value refers to the enhancement of value attributable to such amenities.

appraisal

An estimate, usually in written form, of the value of a specifically described property as of a

specified date; may be used synonymously with valuation or appraised value.

appraisal schedules

Any standardized schedules and tables used in conjunction with a revaluation program such as replacement cost pricing schedules, depreciation tables, land depth tables, etc.

appraised value

See appraisal.

appraiser

One who estimates value. More specifically, one who possesses the expertise to execute or direct the execution of an appraisal.

assessed value

The value of taxable property to which the tax rate is to be applied in order to compute the amount of taxes; may be used synonymously with assessed value, taxable value, and tax base.

assessing

The act of valuing a property for the purpose of establishing a tax base.

assessment district

An assessor's jurisdiction; it may or may not be an entire tax district.

assessment list

Document sent to taxpayer showing ownership, legal description and values assigned to the property.

assessment period

The period of time during which the assessment of all properties within a given assessment district must be completed; the period between tax lien dates.

assessment ratio

The ratio of assessed value to a particular standard of value, generally the appraised value. A percentage to be applied to the appraised value in order to derive the assessed value. Also, referred to as a taxable percentage.

assessment roll

The official listing of all properties within a given taxing jurisdiction by ownership, description, and location showing the corresponding assessed values for each; also referred to as tax list, tax book, tax duplicate and tax roll.

assessor

The administrator charged with the assessment of property for ad valorem taxes; his precise duties differ from state to state depending upon state statutes.

assessor's code

A unique identifier assigned by the assessor to identify property owned by one owner. Not the same as parcel number.

average deviation

In a distribution of values, the average amount of deviation of all the values from the mean value, equal to the total amount of deviation from the mean divided by the number of deviations. As applied to an assessment-to-sale ratio distribution, the average amount which all the ratios within the distribution deviate from the mean ratio.

base price

A value or unit rate established for a certain specified model, and subject to adjustments to account for variations between that particular model and the subject property under appraisal.

base value

The total current appraised value, including new construction and appeal adjustments. This value is generated from the cost base year for the reappraisal cycle, and does not include sales ratio adjustments.

blighted area

A declining area characterized by marked structural deterioration and/or environmental deficiencies.

Board of Equalization

A non-jurisdictional board charged with the responsibility of reviewing assessments across properties and taxing districts and to assure that said properties and districts are assessed at a uniform level either raising or lowering assessments accordingly; also referred to as County Tax Appeal Board or State Tax Appeal Board.

building residual technique

A building valuation technique which requires the value of the land to be a known factor; the value of the buildings can then be indicated by capitalizing the residual net income remaining

after deducting the portion attributable to the land.

capitalization

A mathematical procedure for converting the net income which a property is capable of producing into an indication of its current value. See income approach.

CDU rating

A composite rating of the overall condition, desirability, and usefulness of a structure as developed by the Cole-Layer-Trumble Company and used nationally as a simple, direct, and uniform method of estimating accrued depreciation.

central business district

The center of the city in which the primary commercial, governmental and recreational activities are concentrated.

certified assessment evaluator

A professional designation (C.A.E.) conferred by the International Association of Assessing Officers (IAAO) upon qualifying assessors.

classified property tax

An ad valorem property tax under which the assessment ratio varies for different property classes.

component part-in-place method

The application of the unit-in-place method to unit groupings or construction components. See unit-in-place method.

corner influence

The enhancement to the value of a property rising out of its corner location; most generally applicable to commercial properties.

cost approach

One of the three traditional approaches to value by which an indication of the value of a property is arrived at by estimating the value of the land, the replacement or reproduction cost new of the improvement, and the amount of accrued depreciation to the improvement; the estimated land value is then added to the estimated depreciated value of the improvements to arrive at the estimated property value. Also referred to as the cost-to-market approach to indicate that the value estimates are derived from market data abstraction and analysis.

cost factor

A factor or multiplier applied to a replacement or reproduction cost to account for variations in location and time, as well as for other elements of construction costs not otherwise considered.

CTAB

County Tax Appeal Board, see Board of Equalization.

cubic content

The cubic volume of a building within the outer surface of the exterior walls and roof and the upper surface of the lowest floor.

data collection card

A specially designed card or form used by field personnel to record specific property characteristics in a uniform manner, which is subsequently used as a source document for data processing in a mass appraisal environment.

data collector

See lister.

deed

A written instrument which conveys an interest in real property. A quitclaim deed conveys the interest described therein without warranty of title. A trust deed conveys interest described therein to a trustee. A warranty deed conveys the interest described therein with the provisions that the freehold is guaranteed by the grantor, his heirs, or successors.

depreciation

Loss in value from all causes; may be further classified as physical, referring to the loss of value caused by physical deterioration; functional, referring to the loss of value caused by obsolescence inherent in the property itself; and economic, referring to the loss of value caused by factors extraneous to the property. Accrued depreciation refers to the actual depreciation existing in a particular property as of a specified date.

Normal depreciation refers to that amount of accrued depreciation one would normally expect to find in buildings of certain construction, design, quality and age.

depreciation allowance

A loss of value expressed in terms of a percentage of replacement or reproduction cost new.

depth factor

A factor or multiplier applied to a unit land value to adjust the value in order to account for variations in depth from an adopted standard depth.

depth table

A table of depth factors.

design factor

A factor or multiplier applied to a computed replacement cost as an adjustment to account for cost variations attributable to the particular design of the subject property which were not accounted for in the particular pricing schedule used.

deterioration

Impairment of structural condition evidenced by the wear and tear caused by physical use and the action of the elements, also referred to as physical depreciation.

economic depreciation

See economic obsolescence.

economic life

The life expectancy of a property during which it can be expected to be profitably utilized.

economic obsolescence

Obsolescence caused by factors extraneous to the property. Also referred to as economic depreciation.

economic rent

The rent which a property can be expected to bring in the open market as opposed to contract rent or the rent the property is actually realizing at a given time.

effective age

An age assigned to a structure based upon its condition as of the effective valuation date; it may be greater or less than the structure's actual age. Compare with actual age.

effective depth

In reference to property valuation, that depth, expressed in feet, upon which the selection of the depth factor is based.

effective frontage

In reference to property valuation, that total frontage, expressed in lineal feet, to which the

unit land value is applied. It may or may not be the same as the actual frontage.

effective gross income

The estimated gross income of a property less an appropriate allowance for vacancies and credit losses.

effective valuation date

In reference to a revaluation program, the date as of which the value estimate is applicable.

encroachment

(1) To gradually intrude on the rights or possessions of another. (2) The displacement of an existing use by another use, such as locating commercial or industrial improvements in a residential district.

environmental deficiency

A neighborhood condition such as adverse land uses, congestion, poorly designed streets, etc., operating to cause economical obsolescence and, when coupled with excessive structural deterioration, blight.

equalization program

A mass appraisal (or reappraisal) of all property within a given taxing jurisdiction with the goal of equalizing values in order to assure that each taxpayer is bearing only his fair share of the tax load; may be used synonymously with a revaluation program or reappraisal cycle.

equity

In reference to property taxes, a condition in which the tax load is distributed fairly or equitably; opposite of inequity which refers to a condition characterized by an unfair or unequitable distribution of the tax burden. Inequity is a natural product of changing economic conditions which can only be effectively cured by periodical equalization programs.

In reference to value, it is that value of the property remaining after deducting all liens and charges against it.

excessive frontage

Frontage which because of the particular utility of the lot does not serve to add value to the lot.

exempt property

See tax exemption.

GLOSSARY

fee appraisal

Generally referred to mean a rather extensive detailed appraisal for a single property or singularly used properties for a specific purpose.

field crew

The total professional staff assigned to a specific appraisal project, including listers, reviewers, staff appraisers, and clerical and administrative supporting personnel.

functional depreciation

See depreciation.

functional obsolescence

Obsolescence caused by factors inherent in the property itself. Also referred to as functional depreciation.

functional utility

The composite effect of a property's usefulness and desirability upon its marketability.

geocode

See parcel number.

grade

The classification of an improvement based upon certain construction specifications and quality of materials and workmanship.

grade factor or variation

A factor or multiplier applied to a base grade level for the purpose of interpolating between grades or establishing an intermediate grade.

grantee

A person to whom property is transferred and property rights are granted by deed, trust instrument, or other similar documents. Compare with grantor.

grantor

A person who transfers property or grants property rights by deed, trust instrument, or other similar documents. Compare with grantee.

gross area

The total floor area of a building measured from the exterior of the walls.

gross income

The scheduled annual income produced by the operation of a business or by the property itself.

gross income multiplier

A multiplier representing the relationship between the gross income of a property and its estimated value.

gross leasable area

The total area of leasable space of an income producing property. Includes the common areas of the property (hallways, restrooms, etc.), as well as the floor area occupied by the tenant. Compare net leasable area.

gross sales

The total amount of invoiced sales before making any deductions for returns, allowances, etc.

ground lease

A document entitling the lessee certain specified rights relating to the use of the land.

ground rent

Net rent from a ground lease; that portion of the total rent which is attributable to the land only.

improved land

Land developed for use by the erection of buildings and other improvements.

improvement

Anything done to raw land with the intention of increasing its value, such as constructing a building or installation of sewer and water lines. The statutory definition of an improvement can be found in 15-1-101 M.C.A.

income approach

One of the three traditional approaches to value which measures the present worth of the future benefits of a property by the capitalization of its net income stream over its remaining economic life. The approach involves making an estimate of the potential net income the property may be expected to yield, and capitalizing that income into an indication of value.

income property

A property primarily used to produce a monetary income.

industrial park

A subdivision designed and developed to accommodate specific types of industry.

industrial property

Land, improvements, and/or machinery used or adaptable for use in the production of goods either for materials, or by changing other materials and products, i.e., assembling, processing and manufacturing ... as well as the supporting auxiliary facilities thereof.

inequity

See equity.

influence factor

A factor serving to either devalue or enhance the value of a particular parcel of land, or portions thereof, relative to the norm for which the base unit values were established; generally expressed in terms of a percentage adjustment.

institutional property

Land and improvements used in conjunction with providing public services and generally owned and operated by the government or other nonprofit organizations ... hospitals, schools, prisons, etc. Such property is generally held exempt from paying property taxes.

interest rate

A rate of return on capital. Frequently implies a contract rate; for example, a mortgage interest rate.

land classification

The classification of land based upon its capabilities for use and/or production.

land contract

A purchase contract wherein the grantee takes possession of the property with the grantor retaining the deed to the property until the terms of the contract are met as specified.

land residual technique

A land valuation technique which requires the value of the building(s) to be known; the value of the land can then be indicated by capitalizing the residual net income remaining after deducting the portion attributable to the building(s).

landscaping

Natural features such as lawns, shrubs and trees added to a plot of ground or modified in such a way as to make it more attractive.

land use restrictions

Legal restrictions regulating the use to which land may be put.

land value maps

A map used in conjunction with mass appraising, generally drawn to a small scale, and showing comparative unit land values, on a block to block basis.

lease, lessee, lessor

A written contract by which one party (lessor) gives to another party (lessee) the possession and use of a specified property, for a specified time, and under specified terms and conditions.

leasehold

A property held under the terms of a lease.

leasehold improvements

Additions, renovations, and similar improvements made to a leased property by the lessee. The statutory definition of leasehold improvements can be found in 15-1-101 M.C.A.

leasehold value

The value of a leasehold; the difference between the contractual rent and the currently established economic or market rent.

legal description

A description of a parcel of land which serves to identify the parcel in a manner sanctioned by law.

lister

A field inspector or data collector whose principle duty is to collect and record property data. (Not an appraiser.)

M.A.I.

A professional designation (Member of the Appraisal Institute) conferred by The American Institute of Real Estate Appraisers on qualifying real estate appraisers.

market data approach

One of the three traditional approaches to value by which an indication of the value of a property is arrived at by compiling data on recently sold properties which are comparable to the subject property and adjusting their selling prices to account for variations in time, location, and property characteristics between the comparables and the subject property.

market value

The price an informed and intelligent buyer, fully aware of the existence of competing properties, and not compelled to act, would be justified in paying for a particular property.

mass appraisal

Appraisal of property on a mass scale, such as an entire community, generally for ad valorem tax purposes, using standardized appraisal techniques and procedures to affect uniform equitable valuations within a minimum of detail, within a limited time period and at a limited cost ... as opposed to a fee appraisal which is generally used to refer to a rather extensive detailed appraisal of a single property or singularly used properties for a specified purpose.

mineral rights

The right to extract subterranean deposits such as oil, gas, coal, and minerals, as specified in the grant.

minimum rental

That portion of the rent in a percentage lease which is fixed.

model method

A method of computing the replacement or the reproduction cost of an improvement by applying the cost of a specified model and adjusting the cost to account for specified variations between the subject improvement and the model.

modernization

The corrective action taken to update a property so that it may conform with current standards.

mortgage, mortgagee, mortgator

A legal document by which the owner of a property (mortgagor) pledges the property to a creditor (mortgagee) as security for the payment of a debt.

neighborhood

A geographical area exhibiting a high degree of homogeneity in residential amenities, land use, economic and social trends, and housing characteristics.

neighborhood trend

Three stages in the life cycle of a neighborhood ... the improving stage characterized by development and growth; the static stage characterized by a leveling off of values; and the

declining stage characterized by infiltration and decay.

net income

The income remaining from the effective gross income after deducting all operating expenses related to the cost of ownership.

net leasable area

The area of leasable space of an income producing property that includes only the floor area occupied by the tenant. Compare gross leasable area.

net lease

A lease wherein the lessee assumes to pay all applicable operating expenses related to the cost of ownership; also referred to as net net, or net net net lease.

net sales

Gross sales less returns and allowances.

net sales area

The actual floor area used for merchandising, excluding storage rooms, utility and equipment rooms, etc.

non-conforming use

A use which, because of modified or new zoning ordinances, no longer conforms to current use regulations, but which is nevertheless upheld to be legal so long as certain conditions are adhered to.

notice of value

A written notification to a property owner of the assessed value of certain properties described therein; often mandated by law to be given to each property owner following a revaluation of his property.

observed depreciation

That loss in value which is discernable through physical observation by comparing the subject property with a comparable property either new or capable of rendering maximum utility.

obsolescence

A diminishing of a property's desirability and usefulness brought about by either functional inadequacies and overadequacies inherent in the property itself, or adverse economic factors external to the property. Refer to functional depreciation and economic depreciation.

operating expenses

The fixed expenses, operating costs, and reserves for replacements which are required to produce net income before depreciation, and which are to be deducted from effective gross income in order to arrive at net income.

overage income

Rental received in addition to the minimum contract rental based upon a specified percentage of a tenant's business receipts.

overall rate

A capitalization rate representing the relationship of the net income (before recapture) of a property to its value as a single rate; it necessarily contains, in their proper proportions, the elements of both the land and the building capitalization rates.

overassessed

A condition wherein a property is assessed proportionately higher than comparable properties.

parcel

Piece of land held in one ownership.

parcel number

An identification number, which is assigned to a parcel of land to uniquely identify that parcel from any other parcel within a given taxing jurisdiction.

percentage lease

A type of lease in which the rental is stipulated to be a percentage of the tenant's gross or net sales, whichever specified.

personal property

Property which is not permanently affixed to and a part of the real estate, as specified by state statutes.

physical depreciation

See depreciation.

preferential assessment

An assessing system which provides preferential treatment in the form of reduced rates to a particular class of property, such as a system providing for farm properties to be assessed in accordance to their value in use as opposed to their value in the open market.

property class

A division of like properties generally defined by statutes and generally based upon their present use. The basis for establishing assessment ratios in a classified property assessment system. See classified property tax.

property inspection

A physical inspection of a property for the purpose of collecting and/or reviewing property data.

property record card

A document specially designated to report or process specified property data; may serve as a source document, a processing form; and/or a permanent property record.

public utility property

Properties devoted to the production of commodities or services for public consumption under the control of governmental agencies such as the Public Utility Commission.

quantity survey method

A method of computing the replacement or the reproduction cost of an improvement by applying unit costs to the actual or estimated material and labor quantities and adding an allowance for overhead, profit, and all other indirect construction costs.

real estate

The physical land and appurtenances affixed thereto; often used synonymously with real property.

real property

All the interests, benefits, and rights enjoyed by the ownership of the real estate.

reappraisal

The revaluation of all properties within a given jurisdiction for the purpose of establishing a new tax base.

reappraisal cycle

See equalization program.

rent

The amount paid for the use of a capital good. See economic rent.

replacement cost

The current cost of reproducing an improvement of equal utility to the subject property; it may or may not be the cost of reproducing a replica property. Compare with reproduction cost.

reproduction cost

The current cost of reproducing a replica property. Compare with replacement cost.

reserve for replacements

A reserve established to cover renewal and replacements of fixed assets.

residential property

Vacant or improved land devoted to or available for use primarily as a place to live.

revaluation program

See equalization program.

sales ratio study

A statistical analysis of the distribution of assessment or appraisal-to-sale ratios of a sample of recent sales made for the purpose of drawing inferences regarding the entire population of parcels from which the sample was abstracted.

salvage value

The price one would be justified in paying for an item of property to be removed from the premises and used elsewhere.

site development costs

All costs incurred in the preparation of a site for use.

soil productivity

The capacity of a soil to produce crops.

sound value

The depreciated value of an improvement.

sound value estimate

An estimate of the depreciated value of an improvement made directly by comparing it to improvements of comparable condition, desirability, and usefulness without first estimating its replacement cost new.

STAB

State Tax Appeal Board, see Board of Equalization.

standard depth

That lot depth selected as the norm against which other lots are to be compared; generally the most typical depth.

sublease

See lease; the lessee in a prior lease simply becomes a lessor in a sublease.

tax bill

An itemized statement showing the amount of taxes owed for certain property described therein and forwardable to the party(s) legally liable for payment thereof.

tax book

See assessment roll.

tax district

A political subdivision over which a governmental unit has authority to levy a tax.

tax duplicate

See assessment roll.

tax exemption

Either total or partial freedom from tax; total exemption such as that granted to governmental, educational, charitable, religious, and similar nonprofit organizations, and partial exemption such as that granted on homesteads, etc.

tax levy

In reference to property taxes, the total revenue which is to be realized by the tax.

tax list

See assessment roll.

tax mapping

The creation of accurate representations of property boundary lines at appropriate scales to provide a graphic inventory of parcels for use in accounting, appraising and assessing; such maps show dimensions and the relative size and location of each tract with respect to other tracts.

tax rate

The rate generally expressed in dollars per hundred or dollars per thousand (mills) which is to be applied against the tax base (assessed value) to compute the amount of taxes. The tax rate is derived by dividing the total amount of the tax levy by the total assessed value of the taxing district.

tax roll

See assessment roll.

taxable percentage

See assessment ratio.

taxable value

See assessed value.

tillable land

Land suitable for growing annual crops.

topography

The physical features of land.

underassessed

A condition wherein a property is assessed proportionately lower than comparable properties.

uniformity

As applied to assessing, a condition wherein all properties are assessed at the same ratio to market value, or other standard of value depending upon the particular practices followed.

unimproved land

Vacant land; a parcel for which there is no improvement value.

unit cost or price

The price or cost of one item of a quantity of similar items.

unit-in-place method

A method of computing the replacement or reproduction cost of an improvement by applying established unit-in-place rates, developed to include the cost of materials, equipment, labor, overhead and profit, to the various construction units.

use density

The number of buildings in a particular use per unit of area, such as a density of so many apartment units per acre.

use value

A procedure used to value agricultural land for ad valorem tax purposes which is based on the agricultural income or productivity attributable to the inherent capabilities of the land.

vacancy

An unrented unit of rental property.

vacant land

Unimproved land; a parcel for which there is no improvement value.

valuation

See appraisal.

view

The scene as viewed from a property.

waterfrontage

Land abutting on a body of water.

woodland

Land which is fairly densely covered with trees.

zoning regulations

Governmental restrictions relating to the use of land.

G2.4. STATISTICAL TERMS**aggregate ratio**

As applied to real estate, the ratio of the total assessed value to the total selling price.

average deviation

In a distribution of values, the average amount of deviation of all the values from the mean value equal to the total amount of deviation from the mean divided by the number of deviations.

cell

The basic unit making up a stratified sample; each cell representing a distinct group within the total universe.

coefficient

A value prefixed as a multiplier to a variable or an unknown quantity.

coefficient of dispersion

As applied to an assessment-to-sale ratio distribution, a measure of dispersion in a given distribution equal to the average deviation of the ratios from the mean ratio divided by the mean ratio.

frequency distribution

A display of the frequency with which each value in a given distribution occurs; or in a grouped frequency distribution, a display of the frequency

with which the values within various intervals, or value groupings, occur.

mean

A measure of central tendency equal to the sum of the values divided by the number. Also referred to as an arithmetic average or arithmetic mean.

median

A measure of central tendency equal to that point in a distribution above which 50% of the values fall and below which 50% of the values fall. The 50th percentile. The 2nd quartile.

mode

A measure of central tendency equal to that value occurring most frequently in a given distribution. In a grouped frequency distribution, the mode is equal to the mid point of the interval with the greatest frequency.

normal distribution

A distribution in which all the values are distributed symmetrically about the mean value, with 68.26% of the values falling between ± 1 standard deviation, 95.44% between ± 2 standard deviations, and 99.74% between ± 3 standard deviations.

percentile rank

The relative position of a value in a distribution of values expressed in percentage terms; for instance, as applied to an assessment-to-sale ratio distribution, a ratio with a percentile rank of 83 would indicate that 83% of the ratios were lower and 17% of the ratios were higher than that particular ratio.

precision

As applied to real estate, it refers to the closeness of estimated value to actual selling price on an aggregate basis.

price related differential

As applied to real estate, an analytical measure of the vertical uniformity of values in a given distribution calculated by dividing the mean ratio by the aggregate ratio; a ratio of more than 1 being generally indicative of the relative undervaluation of high priced properties as compared to the less valuable properties, whereas a ratio of less than 1 would indicate the converse relationship.

quartile

Positions in a distribution at 25 percentile intervals; the first quartile being equal to the 25th percentile, the second quartile being equal to the 50th percentile or the median, and the third quartile being equal to the 75th percentile.

range

The difference between the highest and the lowest value in a distribution.

ratio

A fixed relationship between two similar things expressed in terms of the number of times the first contains the second; the quotient of one quantity divided by another quantity of the same type, generally expressed as a fraction.

regression analysis

A statistical technique for making statements as to the degree of linear association between a criterion (dependent) variable and one or more predictor (independent) variables; a simple linear regression having one independent variable, and multiple linear regression having more than one independent variable.

sample

As applied to real estate, a set of parcels taken from a given universe which is used to make inferences about values for the universe.

A probability sample is a sample in which each parcel in the universe is given equal chance of being included. Also referred to as random sample.

A non-probability sample is a sample in which each parcel in the universe being chosen by other criteria, is not given an equal chance of being included. Essentially all assessment-to-sale ratio studies are non-probability samples.

sample size

As applied to real estate, the number of parcels needed from a universe to achieve a desired level of precision, given the total number of parcels in the universe and the standard deviation thereof.

standard deviation

A measure of dispersion, variability or scatter of values in a given distribution equal to the square root of the arithmetic mean of the squares of the deviations from the mean.

standard error of the mean

A measure of the statistical variability of the mean equal to the standard deviation of the distribution divided by the square root of the sample size.

stratified sampling

The selection of sample parcels from distinct groups within the total universe based upon the

known sizes and characteristics of these distinct groups.

universe

As applied to real estate, all the parcels of a given type in the group under study, i.e., all the parcels of a given neighborhood, district, etc. Also referred to as population.

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21

15 1750 4 1.500

